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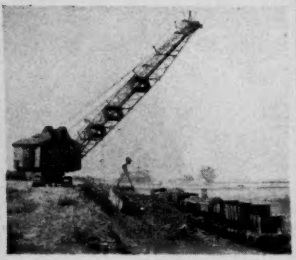

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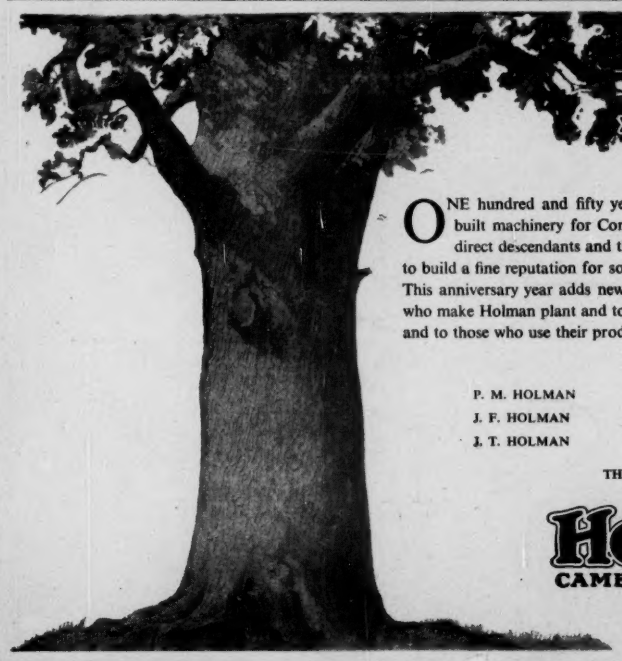

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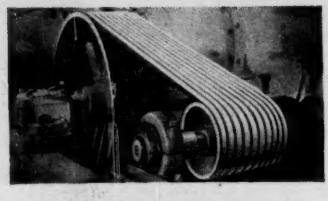

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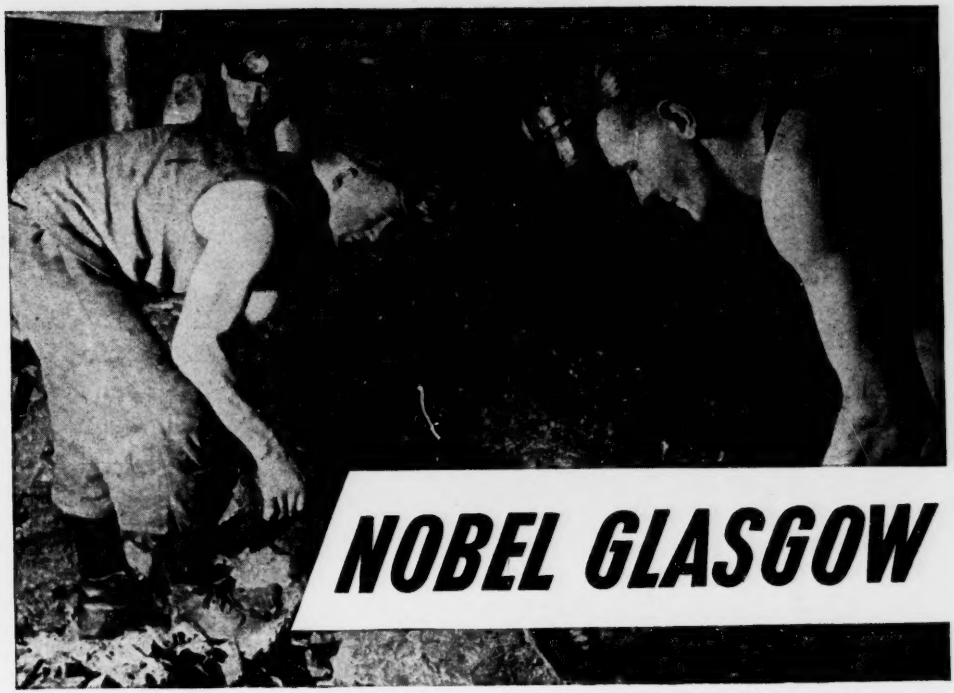

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THIS WEEK'S FEATURES

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NOTES AND COMMENTS

Watchman, What of the Night?

The New Year, which opened on Monday, is a momentous one, marking, as it does the beginning of the second half of the 20th century and the growing alignment of the forces of the Free Nations and Communistic imperialism. Two main lines of reflection, therefore, suggest themselves, retrospect and prospect.

In review, we look back upon a period of unparalleled material growth for the world, in which the mineral industry perhaps takes the leading place. Materially speaking, the draught on Nature's mineral resources since the year 1900, in terms of 11 major products, has been in tonnage of extracted mineral products, irrespective of values or prices, of the order of three and a half times the rate at the beginning of the century. The following table gives world figures for 1900 and 1950, though the latter are necessarily rather round estimates in some cases.

	1900	1950
Coal ...	... 767,000,000 tonnes	1,689,000,000 tonnes
Steel ...	... 41,310,000 ,,	175,000,000 ,,
Copper ...	497,000 ,,	2,400,000 ,,
Lead ...	... 849,000 ,,	1,290,000 ,,
Tin ...	... 85,400 ,,	142,000 ,,
Zinc ...	... 465,000 ,,	1,692,000 ,,
Aluminium ...	7,340 ,,	1,300,000 ,,
Nickel ...	9,500 ,,	120,000 ,,
Gold ...	... 12,420,000 f.oz.	25,000,000 f.oz.
Silver	... 174,000,000 ,,	172,000,000 ,,
Petroleum	... 149,140,000 bbl.	3,500,000,000 bbl.

The proportionate increases, of course, vary enormously. Petroleum is the young giant of the mineral family and for a long time past each year has established a fresh record. At the beginning of this century, aluminium was hardly an industrial metal; now, on a volumetric basis, it takes second place to steel. Coal, in its somewhat venerable age, has not much more than doubled and finds it hard to keep abreast of the times. Copper has increased nearly five times; zinc production has been enhanced nearly four times, but lead and tin show increases of only about one and a half times. Gold, so far as we can estimate it, with Russia an unknown quantity, is just about double the production rate at the beginning of the century, though output was, of course, far higher at the outbreak of the last war. Silver, overshadowed by the spectres of bi-metalism, special legislation and price manipulations, shows no gain. Ever since the end of the last war a new element has claimed widespread interest and activity in the shape of the atomic source minerals beginning with pitchblende. Official secrecy screens this field of mining activity but it is undoubtedly very extensive and if industrial developments fulfil hopes it may well take an important place in future world economy.

The enormous cumulative draughts on nature's irreplaceable resources during the past 50 years raise in an increasingly imperative form the shadow of a mineral supply famine. Periodic scarcities of various metals have, from time to time, evoked jeremiads, more particularly in the case of gold and tin, but prices have risen in response and the threat has receded, and perhaps been generally forgotten. With the onset of the second World War, however, we have seen a progressive rise in prices, the concomitant of scarcity, which, in the last year or two has left all previous fluctuations in the cold. For this development Nature is far from being solely responsible. Economic conditions have so raised costs of production generally, that as yet there has been little sign of price rises exercising their recreative effect so marked in earlier years. One of the tragedies of the present time is that it is not widely enough understood that mining enterprise lives in the future. Current prices for mineral products tempt hard-pressed governments to deal voraciously with mining undertakings, forgetting conveniently that much of the profit shown in the accounts of operating companies must be once more ploughed back into prospecting and development, and is in fact the seed corn for the productions of future years. By and large we have to deplore the absence of big discoveries of new metalliferous mines. For this there are many reasons, apart from the expropriation of what might be venture money, the increasing scale and complexity of mining undertakings; the difficulty of obtaining new plant; the great mortality in the number of independent concerns, accompanied as it is by a notable decrease in the numbers of independent prospectors and the insecurity, particularly in the Far East, under which they cannot operate. What is perhaps more ominous than the present dearth of metals already throwing the shadow of restricted use over their prospects, is the apprehension that further price advances, which in the past have redressed the adverse balance, may become increasingly impracticable through the inability of consumers of manufactured goods to pay the greatly enhanced prices which they necessitate. True this may be met, to a large extent, by substitution, but progress of this kind demands time,

and the absence of such distractions to orderly civil life such as we are now experiencing.

There are great prospects for aluminium and, in a thousand directions, for new alloys. But the expansion of aluminium itself has been hampered by the world power shortage and the competition of more immediate necessities. To-day, more than ever, "all-devising" man, as the Greek poet called him, is called upon to find fresh media to supplement the exhaustion of natural resources among the older and more familiar raw materials of industry.

Technically, the advances in mining and metallurgical practice in the half-century have been enormous, particularly in the scale of operation and in mechanization steadily increasing the output capacity of every pair of hands. In metal mining three major developments have largely contributed to the immensely increased output of the half-century. Cyaniding is the basis of modern gold recovery, while in the base metal industry flotation has revolutionized recoveries and permitted the working of refractory and low-grade ores. Now similar claims are made for methods of treatment by heavy media separation plants. Without these metallurgical successes the world's material progress would long ago have been curtailed by scarcity of supplies. We can only hope that in the years to come other striking improvements and new processes may continue to convert waste rock into economic ore.

While we have to deplore the dying out of the old race of hardy and independent prospectors, we have to welcome the widespread development of scientific prospecting on a great scale, utilizing geophysics, the aeroplane with its photographic and electronic potentialities, as well as its ability to land and supply prospecting parties in otherwise inaccessible territory, and in no small degree tropical hygiene. In this connection we have to record the major discoveries of iron ore fields in Labrador and Eastern Venezuela, and to geophysics in particular must go the credit of the spectacular revelations of oil deposits, particularly in the Middle East, and of the promise of a big new goldfield in the Orange Free State.

From a national point of view we have to note with regret the decline of the primacy of London as a world financial and controlling influence. The financial exhaustion of Great Britain in the first, and still more in the second World War, has reduced our ability to raise the great amounts of new capital which international finance, centred in the metropolis, provided so successfully in the earliest part of the century, while the closing of the London Metal Exchange greatly added, as it was bound to do, to the impossibility of stabilizing prices, facilitating the hedging by consumers of requirements, and in general maintaining orderly markets. What the future evolution will be we cannot venture to guess. International regulation coupled with government stockpiling, is a war-time improvisation hardly compatible with independent competitive conditions such as we have known in the past.

As a corollary of increasing state intervention with control and interception of the profits of mining companies, there has followed naturally increasing Government participation in mineral discovery and development in undeveloped territories, particularly in the British Colonial domain. Far reaching schemes for geological survey and colonial development generally have been projected since the war, especially in the tropics with their exiguous white population, in some cases with assistance from the United States, where the problem of future mineral supplies has been realized longer, probably, than in this country.

It would be doing less than justice to a survey for the New Year to omit to notice what must be the preoccupation of all the inhabitants of countries not dominated by the Communist dictatorship—the threat that the war now raging in Korea may extend in the Far East and be launched on the frontiers of Western Europe with the coming of spring. The shock of Russian aggression in Korea had its major effect, as we anticipated at the time, in disturbing international economy. The isolationist character of Soviet economy has rendered Russia, at any rate, immune to the effects of this disturbance. Communism as conceived by the Kremlin is unquestionably militant, but so far Russia has been satisfied with spoiling tactics, and has been careful not to commit herself directly by way of hostilities. The possibilities of extending trouble in the East are enormous and can, no doubt, be pursued with increasing pressure, but this does not necessarily mean Armageddon. The meeting of the Commonwealth Prime Ministers in London this week is clear evidence that the threat is appreciated and will be met with the same resolution that the United States, under President Truman's leadership, has already shown. More than this it is useless to hazard now. To use a phrase much in evidence during the late war, 1951 must be a "climacteric year" which will leave indelible traces on the economies of the Free Nations. On our constancy and resolve must depend the future of civilization as we have known it in the past.

B.O.M.A. Speaks Out

However commonplace have now become the arguments for and against mining companies transferring control of their enterprises from London to elsewhere they are worth stating *ad nauseam* until the great disadvantages to this country of their migration percolates through to those who can, and must, amend the present anachronistic and ill-devised system of taxation. No one is better suited to air the grievances of the mining companies than Mr. Robert Annan, retiring President of the British Overseas Mining Association, which during the past year has increasingly directed attention to matters concerning the taxation of mining companies. B.O.M.A.'s annual meeting was held on December 29, when Mr. Annan made it absolutely clear that the association would employ all the means within its power to secure an abatement of the present burden on companies controlled in this country so as to remove the incentive to migrate as a means of securing tax relief. Evidence would be submitted to the Royal Commission on taxation under Lord Justice Cohen, he said, but more urgent measures were also required.

Probably the most telling general argument in favour of revision of the taxation laws relating to mining companies overseas was Mr. Annan's concluding sentence: "It would be foolish in the extreme to persist in an obsolete and ill-conceived system of taxation well calculated to drive such valuable business away, particularly at a time when this country is so dependent on overseas trade and sources of raw materials."

Mineral Wealth in Cleveland

Exactly one hundred years after the discovery and exploitation of the main seam of ironstone in the Cleveland hills established the supremacy of the neighbourhood as the chief pig-iron producing area in the Kingdom, another source of mineral wealth has been located in the same district, and offers potentialities of immense importance in the national economy.

The beginning of the story dates back to 1938 when the D'Arcy Exploration Co. prospecting for oil in the Whitby area, sunk a deep borehole and discovered traces of potash. Imperial Chemical Industries became interested. Over a period of years they carried out further deep borings which have conclusively established the existence of vast deposits of this valuable mineral. Independent borings by Fisons Ltd. at Robin Hood's Bay to the south of Whitby have amply confirmed the extent and the purity of the potash deposits which are said to be 30 ft. thick. The one snag is their depth which ranges from 3,450 ft. at Robin Hood's Bay to 4,000 ft. in the Whitby area.

At present, the deepest potassium beds which are commercially mined in Europe are at a depth of 3,500 ft. in Hanover, and the problem now exercising the minds of the scientist is the possibility of extraction on a commercial basis. No final conclusions have been reached.

The choice appears to rest between the adoption of mining technique, or whether solution methods can be employed similar to the brine extraction system in the Tees-side salt beds. The ultimate decision is too important to be hurried. But the importance of the issue can be judged when it is stated that although the drillings have hitherto been confined to an area of 12 square miles the calculated quantity of potassium chloride is over 200,000,000 tons.

Dr. Alexander Fleck, who has charge of the I.C.I. investigations, believes that the total deposits are greater still, and if these can be commercially developed, it may be possible to dispense with imports which are at present costing £6,000,000 per annum. There may also be substantial export possibilities subject only to the condition that production can be accomplished at a competitive figure.

No doubt Dr. Fleck and his colleagues who have already spent £170,000 on the preliminary investigations, can be trusted to pursue with equal diligence the ultimate development of this rich store of buried treasure.

Canada

(From Our Own Correspondent)

North Bay, December 17.

Nesbitt LaBine Uranium Mines Company is operating a property in the northern part of the province of Saskatchewan which shows good promise of growing into a substantial producer of uranium. The property is on the north shore of Beaverlodge Lake, situated about seven miles from the town of Goldfields on Lake Athabasca. Pitchblende has been found in a series of narrow veins or veinlets which range from one to eight inches in width. At one point where two faults merge, a width of 40 in. of high grade is in evidence. Selected samples of massive pitchblende assayed 10 to 32 per cent uranium oxide. It has been officially estimated by Gilbert A. LaBine that the showings on the Nesbitt LaBine may be more important than any other uranium deposit so far revealed in the western Hemisphere. The estimate is taken seriously in Canada because of the fact that it was Gilbert LaBine who discovered the uranium mines of Eldorado Mining & Refining Co. at Great Bear Lake in Canada's Northwest Territories and from which came the uranium oxide contained in the first atomic bombs ever exploded. A comprehensive programme of exploration and development is planned for the newly discovered deposits.

IRON ORE DEVELOPMENTS IN ONTARIO

While much has been written regarding the new iron ranges under development in northern Quebec and Labrador, much less publicity has been given to the iron ore developments taking place in the province of Ontario. Steep Rock Iron Mines situated in the westerly part of Ontario shipped over 1,200,000 tons of iron ore during the current year. Now comes official advice that developments on Steep Rock properties have been sufficient to encourage plans looking toward shipments at a rate of 10,000,000 tons annually within the next five years. Add this to the estimates of 10,000,000 tons a year in five years time from the Quebec and Labrador ranges and some idea may be gathered of the important place which iron mining is about to take in the industrial life of Canada.

Discussions are taking place at Ottawa which suggests some hope for increased government aid for the producers of gold in Canada. It has come to be recognized that present economic conditions are imposing difficult burdens on gold mining enterprise. Any further rise in costs of operation would seriously jeopardize the entire industry and would certainly cause a number of the mines to suspend operations. This is causing considerable concern and has induced the Canadian Government to seek ways and means of meeting the situation. It has been observed that gold output from the leading gold mining province of Ontario declined to $3,457,196 during October of this year, compared with production of $3,502,194 in the corresponding period of 1949. This decline was significant because of the fact that it occurred at a time when the operators of gold mines were in reality endeavouring to increase output.

The declaration made yesterday by President Truman that a state of national emergency exists in the United States is not expected to have any immediate repercussions in Canada. While Canada is supplying substantial army and naval assistance to the United Nations, yet the more important part which this country is expected to play in the defence of freedom-loving nations is in the capacity of an important producer and supplier of raw materials. High on the list of products are meat, grain and lumber—while in the field of mining the greater part of the world's nickel, asbestos and platinum metals comes from Canadian mines. In addition, Canada is one of the world's largest producers of lead, copper, zinc, cobalt, and gold. The outlook is that all these basic industries will be encouraged to operate at fullest possible capacities—but with these industries being called upon to pay increasingly heavy taxes to meet growing national expenditures involved in building up larger army, navy and air forces in the general programme of defence.

There is a general demand throughout Canada for a more aggressive policy of immigration as a means of providing the labour force so necessary to growth and expansion of basic industries.

OUTLOOK FOR CAPITAL INVESTMENT

It is significant that capital investment in Canadian industry has averaged $2,000,000,000 to $3,000,000,000 a year for the past five years in addition to all the former capital expansion brought about by war. The outlook is that capital investment will continue at a high rate, spurred on by the favourable conditions under which manufacturing plants operate in this country, by the knowledge that the population of the country is steadily growing, and encouraged by the position which the country is obviously destined to play in the production of iron and oil.

When Consolidated Mining & Smelting Company disburses its regular quarterly dividend in January, the company will have paid out an aggregate of over $250,000,000 in dividends to its stockholders. The share control of the company is held by the Canadian Pacific Railway, with the C.P.R. itself having so far drawn some $132,000,000 in dividends from the mining enterprise.

International Nickel Company of Canada has been operating at maximum capacity during recent months. The same is true of Falconbridge Nickel Mines. As a result, Canadian nickel production for the year just drawing toward a close will amount to approximately 250,000,000 lb. Since the end of the second world war, International Nickel has spent over $40,000,000 on extension of development and installation of new equipment. This outlay has enabled the company to draw upon lower grade ores and thereby conserve the ore resources which are being maintained at well over 300,000,000 tons. The current price of 48c. per lb. in American funds is about 40 per cent higher than the price prevailing prior to the second world war. As a consequence, the value of current nickel production is far exceeding all records of the past.

Some Legal Implications of the Milne-Erleigh Trial

(By a Special Correspondent)

The trial and imprisonment of Joseph Milne and Norbert Stephen Erleigh, former millionaire company directors and at one time joint managing directors of the New Union Goldfields' group of 169 companies in South Africa, have concentrated public attention on the efficacy of the Act controlling company administration in the Union of South Africa, and on the extent to which it protects the interests of shareholders and investors generally.

The question is of particular moment because the trial and its aftermath coincide with a period of post-war development when the confidence of local and overseas investors is more vital than ever to the expansion of the Union's mining and industrial activities, with special emphasis on the development of the new Free State goldfields and all that this signifies to the economy of the Commonwealth.

DRAFT BILL

The trial has spotlighted certain weaknesses in the existing Companies Act, formulated many years ago, and has given new stimulus to the move to tighten up company administration in the Union so that it may meet the new requirements of the times.

In fact, both the country and the Government have for long been alive to the need for a new act. A full inquiry into company administration was made by the Millin Commission within the past two years. Its recommendations have been considered by the Government and at the session of Parliament opening at Cape Town on January 19 next a draft bill will be presented to amend the Companies Act of 1926.

This aims, among other things, at imposing stricter restraints on the appointment, powers, remuneration, reward and share dealings of company directors; at giving the fullest protection to majority and minority shareholders; and at requiring the preparation of comprehensive group accounts for interlocking companies.

In effect, this draft bill aims at closing loopholes disclosed in the course of the trial and in evidence before the commission; and at removing any possibility of abuses in company administration under the system which gives company management great powers and responsibilities in relation to shareholders.

The Government has also asked the King's Counsel, who led the prosecution in the Milne-Erleigh trial, to submit a memorandum with recommendations for further possible improvements and the prevention of abuse of power by company directors.

One of the important recommendations to the Commission of Inquiry was the appointment of a King's Proctor, or special department with powers to investigate any company's affairs or administration and to call for State action where necessary.

All these moves seek to bring the Union's company laws fully up to date and to promote the confidence of local and overseas investors in the administration of companies in the Union and in the proper protection of the interests of investors and shareholders.

The proposed amendments in the law deal particularly with issues that arise from the separation of management from ownership and the growth of group or interlocking companies.

While one cannot detail them all in a brief article, it may be said that the effect of legislation on the lines proposed will be to bring the Union into line with the latest improvements in Britain's own company laws since the Cohen Commission reported.

Milne and Erleigh were sent to gaol for four years and fined something over £40,000 each (or 16 more years) for theft, fraud and breaches of the Companies Act.

THE COURT'S FINDINGS

The Appeal Court confirmed findings of the Trial Court that Erleigh had stolen 100,000 shares for his and Milne's benefit from two companies under his control as managing director of New Union Goldfields, with wide powers delegated to him by the board of directors. The Court also found that he and Milne had conspired fraudulently to allocate to one company in the group certain profits on share deals which should have gone to another; and that Milne had falsely represented that certain shares and share deal profits should go to him and Erleigh and not to the companies by which the shares had been acquired originally.

On another charge (under the Companies Act) Erleigh's and Milne's convictions were confirmed on a charge of allowing a company in which they were interested to trade and borrow money before the requisite certificate to trade had been issued.

Their appeals succeeded on a number of charges of failing to disclose interest in contracts with companies of which they were directors. The Appeal Court held that the law as it stood applied only to disclosure of interest in contracts which were considered or put before the board of a company of which they were directors, and not to contracts which were decided by Erleigh or Milne as managing directors, and which were never considered by the board except by way of subsequent formal confirmation.

The judges said that if this indicated any omission in the law it was for Parliament to consider suitable amendments.

MANAGING DIRECTOR'S POWERS

The evidence at the trial generally dealt with the legal position of a managing director to whom a board had delegated wide powers. The questions raised were whether such a managing director had the right to take up participations long after they had been grantd to him; to allocate profits to companies and individuals at his sole discretion after they had been earned; to grant company loans to persons or companies in which he was interested, without formal resolution by the relevant board; to satisfy calls on one company with shares belonging to another company in the same group; to incur large debts by loan from his own company without reference to the board; and to decide contracts between his company and persons or companies in which he was largely interested.

The question of a managing director's duty towards his company and its shareholders, and the importance of avoiding a clash between self-interest and that duty, was also canvassed.

From the evidence taken by the Commission of Inquiry and at the trial, it appeared that the time had come to define more clearly the rights and duties of directors and managing directors, *vis-a-vis* their shareholders; to provide some adequate restraints and deterrents against possible abuse of privilege and power; and to tighten and speed up procedures of bringing offenders to book.

This, the latest measures proposed by way of amendments to the existing law, aim at doing. Their passage and implementation should reassure investors or potential investors that the authorities in the Union desire to protect their interests by all possible means and that the Union's legislation for the control of company administration will soon be an up-to-date and effective as any in the world.

The Diamond Industry in 1949—1

By W. F. FOSHAG and GEORGE SWITZER

We have recently received from the publishers of the *Jeweler's Circular—Keystone*, their 25th Annual Report on the Diamond Industry for 1949. This report which was compiled for 17 years by the late Dr. Sydney H. Ball, was prepared last year from material which he had accumulated, but which was in an unfinished state at the time of his death, about the middle of 1949. The publishers then expressed the hope that they would be able to carry on the work and it was eventually entrusted to Messrs. Foshag, head of the Geology Department of the Smithsonian Institution, and G. S. Switzer, Associate Curator of the Mineralogy and Petrology Division of that department, from whose report we have prepared an abridgement the first part of which appears below.

A review of the diamond industry must necessarily consider the jewellery industry in the United States, because America is the world's largest single market for these gems. With the closing of the year 1948 business, as a whole in the United States, was at its all-time peak, and as 1949 began much concern was expressed over the immediate prospects. The traditional seasonal pattern of the jewellery industry reasserted itself for the first time in ten years, but still followed somewhat general business trends and was subject to the psychological waves which rolled across a country adjusting itself from a war-time to a peace-time economy.

DEVALUATION

During the first half of 1949 the diamond market was in an unsettled state, with retail sales off 5 to 10 per cent. This condition was perhaps due largely to the depressed economic outlook in the United States, but was also largely influenced by the uncertain effect of the anticipated devaluation of the British pound and other currencies. A further contributory factor was the irregular money manipulations resulting from the disparity between the official and black market rates of the pound and other currencies in relation to the dollar. It was reported that intermediary importers bought diamonds at rates from $2.50 to $3.10 per pound, while U.S. importers were held to the officially pegged rate of $4.03 per pound, making it difficult for United States diamond importers to deal directly with Britain. It is said, more than 50 per cent of all diamonds imported into the United States came from such sources.

On September 18 the pound was devalued in relation to the dollar by 30.5 per cent, necessitating a revision of diamond prices if values were to remain stable. On September 30 the Diamond Trading Corporation announced that new prices had been fixed. The new price scale took into consideration that devaluation affects different diamond centres and the demand for different qualities and sizes in varying degrees. The new price schedule maintained essentially the same dollar values as before devaluation, with some adjustments where necessary. The result has been little change in diamond prices in the United States, but increases up to 40 per cent in European diamond centres.

After a period of hesitancy and uncertainty immediately after devaluation of the pound, pending an announcement by The Diamond Trading Corporation, a lively demand for all types of diamonds arose and the market showed great improvement, which continued to the end of the year.

N. American Imports.—Total gem diamond imports into the United States, in dollar value for 1948/49 were: 1948, $100,645,415; 1949, $69,727,517. The value of imports for 1949 was the lowest in five years, and only about 70 per cent of 1948.

In 1949 Canada imported 46,697 carats of cut diamonds worth $6,061,907 or an average price per carat of $129.81, compared to 37,958 carats, $5,275,321 and $138.98 in 1948. Canada in 1949 imported industrial diamonds amounting to 808,070 carats for which she paid $3,757,886 or $4.65 per carat. In 1948 the corresponding figures were 534,313 carats, $2,485,324 and $4.48.

WORLD PRODUCTION

Accurate figures regarding diamond production are not available for all countries, but the estimates in the following table are believed to be fairly reliable.

World Production of Diamonds, 1947-1949, in Metric Carats
(Including industrial diamonds)

Country	1947	1948	1949
Africa:			
Angola	799,210	795,509	769,981
Belgian Congo	5,474,469	5,824,567	9,649,896
French Equatorial Africa	107,076	118,800	123,000
French West Africa	53,749	77,970	94,996
Gold Coast	852,493	850,000	432,530
Sierra Leone	605,554	465,518	494,119
South-West Africa	179,554	200,691	280,134
Tanganyika	92,229	148,169	191,787
Union of South Africa:			
Lode	918,042	930,000	964,266
Alluvial	•286,692	270,000	289,756
Total Union of South Africa	1,204,734	1,200,000	1,254,022
Brazil	275,000	250,000	250,000
British Guiana	24,669	36,562	34,790
Venezuela	61,634	75,513	56,362
Other countries	3,500	3,500	3,000
Grand total (*Round Figures*)	9,734,000	10,047,000	13,635,000

•*Includes an estimate of* 100,000 *carats for State Mines of Namaqualand.*

South Africa.—In 1949 production in the Union of South Africa and South-West Africa was as follows:

	Carats	£	Average price
UNION OF SOUTH AFRICA			
Mine production	964,266	4,575,714	94/11
Uncontrolled alluvial production	88,273	675,242	153/–
Namaqualand	•201,483	911,123	179/7
	1,254,022	6,162,079	106/10
SOUTH-WEST AFRICA	280,134	3,312,341	236/6

•*Includes an estimate of* 100,000 *carats for State Mines of Namaqualand.*

De Beers Group.—Production from the De Beers group of mines was as follows:

Mine	Carats	£	Average price
Wesselton	406,648	1,835,491	90/3
Du Toits Pan	117,526	1,152,061	196/1
Bultfontein	247,318	974,541	78/10
Jagersfontein	39,963	266,373	133/4
Premier	132,267	231,972	35/1
Kimberley Mine Floors	7,870	26,372	67/–
De Beers Mine	118	1,039	176/1

Premier (*Transvaal*).—The company reports that the re-equipment of the mine for large scale production made satisfactory progress during 1949. The Heavy Media pilot plant, an innovation in diamond recovery methods, was found to operate satisfactorily, and a full scale plant, begun in 1948, is expected to be in full operation early in 1950. The Heavy Media pilot plant operated throughout the year on three shifts per day treating chiefly run of mine ground, the average yield of which was 24.37 carats per 100 loads. Some old dump tailings treated in the plant yielded 12.33 carats per 100 loads. A small prospect plant operated exclusively on bulk samples from development

on the 1,085 ft. level, and yielded 19.5 carats per 100 loads. This latter result is encouraging to the company as it indicates the persistence of payable values to a depth of 270 ft. below the present mining level and that a long life, on the scale of production contemplated, is expected. Total production for 1949 was 132,267 carats.

New Jagersfontein.—Early in 1946 preparations to reopen the Jagersfontein Mine were begun by the De Beers Company. Re-equipment of the mine was completed in 1949, and productive operations resumed. At the end of the year the mine was in full production. Yield for 1949 was at the rate of 6.51 carats per 100 loads; total production was 40,016½ carats. Jagersfontein yields a relatively high proportion of fine coloured stones; yellow stones are uncommon. Sapphire-blue stones are occasionally found. The increased production of high quality stones resulting from the reopening of this mine will be welcome to the gem trade.

S.W. Africa Consolidated Diamond Mines. — The scale of operations was considerably increased during the year, the yield of the diamondiferous ground was satisfactory and increased production obtained. Active prospecting operations continued throughout the year with good results.

Outside the De Beers group only two mines in the Union functioned in 1949, namely, the Star Mine, with a production of 8,129.5 carats valued at £56,445, and the Leicester Mine (Carrig Diamonds) with 3,055.0 carats valued at £27,398.

ALLUVIAL

The alluvial diamond digging industry continues to disintegrate. The only new farms thrown open to diggers were in the Nooitgedacht area, Cape Province, and the results were disappointing. Total uncontrolled production from the alluvial diggings of the Union of South Africa was 88,273 carats valued at £675,242, an average price of 153s.

Reported production figures for Namaqualand were 101,483 carats, valued at £911,123. Figures for the production from the State diggings are not made public by the Department of Mines. Their production has been estimated at 100,000 carats.

South-West Africa.—Three areas were under exploitation in 1949, designated Bogenfels, Area G and Area U. Production during 1948 and 1949 was 189,520 and 243,818 carats respectively. The balance of the total production (36,861.8 carats, valued at £109,313) was produced from independent sources. The average for all fields was 0.59 carats per cubic metre. The average size of all diamonds recovered increased from 0.91 to 1.07 carats. The overall production cost per carat was £2.912 in 1949, compared with £2.072 in 1948. Geological prospecting was continued with the result that payable values were encountered about Uub Vley and Area G.

Belgian Congo.—The Belgian Congo continues to be the world's largest producer of diamonds in terms of quantity, but is second to South Africa in terms of value. It produces about three-fourths of the world's crushing bort so widely used in industry.

Production for the past two years was: 1948, 5,824,567.00 carats; 1949, 9,649,895.67 carats.

Angola.—Production by the Companhia de Diamantes de Angola (Diamang) in 1949 amounted to 769,980.75 carats, of which approximately 56 per cent were gemstones and 44 per cent industrials.

Tanganyika.—Production for 1949 was 191,787 carats, an increase over 1948 of approximately 40 per cent. Exports were in 1948, 148,103 carats (£1,040,459), and in 1949, 192,787 (£1,695,706).

Tanganyika continues to be one of the important diamond fields in the world, due to the excellent quality of its average product. Only 20 yer cent of the production is industrial. A large stone weighing 147.50 carats was found during 1948 and one of 114 carats was reported during the past year (1949).

Gold Coast.—The Gold Coast deposits are extensive but the principal producing area is in the Birim River Valley, which produces 95 per cent of the colony's total. Total production for the year ending December 31, 1949, by the interests of the Consolidated African Selection Trust Limited was 432,530 carats, of which 16 per cent were gem quality and 84 per cent were industrial.

Sierra Leone.—Total production for the year 1949 was 494,119 carats, of which 34 per cent was gem quality and 66 per cent were industrials.

French Africa. — In French Equatorial Africa the principal production comes from the Carnat-Berberati-Nola region in the Haute Sangha. The diamonds are alluvial. Production for 1948 and the first half of 1949 was respectively 118,800 carats and 76,129 carats. Total exports for French Equatorial Africa for 1949 were 132,897 carats.

In French West Africa total production in 1949 was 94,996 carats.

Brazil.—Again little worthwhile information comes out of Brazil. The extent of diamond production is not known because many diamonds are sold to unauthorized buyers.

Diamonds are produced in almost every state in Brazil. The main producers are:

Minas Gerais (about 70 per cent gemstones, 30 per cent industrials).

Mass Deposits. Serrinha, Boa Vista, Cavalo-Morto, Dattas, Sopa, Guinda, Sao Jooa de Chapoda, Sampaio.

Alluvial Deposits. All the rivers and streams near Diamantina and in Western Minas Gerais.

Mato Grosso (About 50 per cent gem and 50 per cent industrial). *Alluvial.* A vast area stretching from Goyaz completely across the state.

Baia (Carbonado bort, industrials and gemstones about in equal amount). Mostly in alluvial fields and old terraces.

Amazonas (fine industrials). All alluvial, chiefly at Maraba.

Sao Paulo (Fine quality gemstones). Alluvial deposits in western part of state.

Parana (Fine quality gemstones). Alluvial deposits at Itabagy.

Piauhy. Produces large quantities of small stones of fair quality. These fields are new and have not been extensively worked due to lack of water on the plains, where the diamonds occur in shallow gravel.

Diamond exports from Brazil in 1948 were reported to be 60,430 carats, a large drop from the 127,920 carats reported in 1947.

Venezuela.—Venezuela in the past 38 years has produced 475,347.29 carats of diamonds from four alluvial districts: San Pedro El Pao, El Sallao Cuyuni, Perai-Tepul Icabara and Guari Sta. Elena. Production for 1949 was 382,455 stones weighing 56,361.54 carats valued at $1,107,506.32.

British Guiana. — Diamond production in British Guiana comes largely from the Mazaruni and Puruni Rivers. The deposits are worked by prospectors using small pans. The grade of the diamondiferous gravel is low and the washers recover only about one-half the contained diamonds. Production for 1949 was 34,790 carats. Diamond production has declined considerably since 1923 when 214,474 carats valued at £1,033,014 were produced.

India.—No information has been received regarding production for 1948 and 1949, if any.

United States.—In October, 1948, mining operations in the well-known diamond-bearing kimberlite pipes near Murfreesboro, Arkansas, were started once again, after a shut-down of many years, by a diamond corporation headed by Glenn L. Martin, under the name of Diamond Corporation of America.

Surface mining was carried on with a 1,000-ton-a-day capacity washing and recovery mill. After mining approximately 120,000 tons of various surface ores from numerous localities in the 60 acres showing periodite, the enterprise was closed as of September, 1949. Closing was caused mainly for the reason that recovery was not sufficient to meet the cost of operations, and secondly, that sufficient moneys were not available to allow financing of mining underground or in new areas. The equipment and machinery have been sold and the corporation abandoned the field about March 15, 1950. The company obtained approximately 840 diamonds, the largest a stone of 4½ carats. Ninety per cent of the stones recovered were small industrials from one-tenth to one carat in size. Total diamonds produced weighed 246.15 carats. The indicated yield of the ground treated is 0.16 carats per 100 loads, compared with 24 carats per 100 loads for the Premier Mine, S.A., and 6.51 per 100 loads for the Jagersfontein Mine.

DISTRIBUTION

The Diamond Trading Company, Ltd., is the medium for the sale of gem diamonds. During the latter part of the year The Diamond Purchasing and Trading Company, Ltd. was organized as a result of negotiations completed between the Union Government, the Administrator of South-West Africa, the Union Producers and the Diamond Corporation, Ltd., by which the existing Diamond Producers' Association agreement, subject to certain adjustments, was extended for a further period of six years from January 1, 1950. Sales agreements have been entered into between the Diamond Producers' Association and the Diamond Purchasing and Trading Company, Ltd., for the sale of gem diamonds. Similar sales agreements were completed between the Diamond Producers' Association and Industrial Distributors (1946), Ltd. for the sale of industrial diamonds. Presumably, the new corporation, The Diamond Purchasing and Trading Company, Ltd. will act as intermediary between the Diamond Producers' Association and the Diamond Trading Company in the transfer of gem diamonds.

During the year sales by The Diamond Trading Company and Industrial Distributors (1946), Ltd. amounted to £28,446,000, compared to £38,000,000 in 1948, a decrease of about £10,000,000. Gem sales came to £19,976,000. Industrial sales amounted to £8,470,000, compared to £11,300,000. The decline in industrial sales was due to smaller purchases by the United States for its stockpile, and not to a falling off in industrial trade demand. (*To be concluded*)

The Asbestos Market

The December issue of *Asbestos*, of Philadelphia, U.S.A., reports that the demand for raw asbestos remains strong and seems likely to continue so. Spinning grades are especially short. The demand for asbestos textiles far exceeds production, and the same is true of brake-lining. Prices of asbestos paper advanced in November/December, and the market is strong. Millboard prices held firm with advances by some manufacturers. For insulation material prices are firm with an upward tendency. While there is still some backlog on roofing and siding shingles, orders show a tendency to slack off. The backlog of orders for asbestos cement pipes remains about the same.

REVIEWS

Canadian Mineral Industry in 1948.—(*Published by Canadian Department of Mines and Technical Surveys. Price* 25*c.*)

The primary aim of these annual reports on the Canadian mineral industry is to provide the interested public with information that it will enable it not only to keep abreast of operations and developments in the industry, but to gain an increasing appreciation of the present and potential importance of mining in the economy of the country. Changes, some of minor importance, others of the greatest significance, are taking place from year to year in the Canadian mineral industry, and the reviews contained in this report, combined with those in previous reports, provide a continuous and valuable source of information.

Minister of Mines Report 1949.—*Province of British Columbia.*

This is the 76th annual report of the Minister of Mines, of the Province of British Columbia, the first publication year being 1874. It records the salient facts in the progress of the industry as well as giving much detail concerning individual mining operations, including those undertaken in the search for exploration and work, followed by sections dealing with metal mining (lode); placer mining; structural materials and industrial minerals; inspection of lode mines, placer mines and quarries; coal mining; and inspection of electrical equipment, and installations of mines and quarries, each with its own table of contents. There are over 360 pages in this useful guide to the mining industry in Canada's most westerly province, and well chosen geological maps assist in giving additional weight to the text.

Breve Historia de la Ingenieria Española, 1950.—*Editorial Dossat, S.A., Madrid.pp.* 227. *No price stated.*

This beautifully produced book—published in a numbered edition on the occasion of the second Spanish Engineering Congress—contains nine interesting articles giving a fairly full account of the history of several important sectors of applied science and technology in Spain.

Readers of this Journal will of course first turn to the comprehensive survey of Mining in Spain, written by Señores Pedro de Novo, Fernández Chicarro and Manuel Ortega Gasset. It goes back to the times of the Phoenicians, Carthaginians and Romans, contains a chapter on the decline of mining in the Middle Ages and gives interesting details of the influence of Spain on the development of mining and metallurgy in the New World. This section is followed by chapters on the 16th and 17th, 18th and 19th centuries, respectively, and there is a concluding chapter on the revival of mining since the 60's of last century. A good geological map, showing also the location of mineral deposits, enhances the value of this historical survey of Spanish mining. Other chapters of interest are devoted to the Evolution of Industry in Spain, by F. M. Martínez, and on Public Works, by C. F. Casado.

The Northern Region, August, 1950. (*Published by the North East Development Association. Price* 1*s.*)

This memorandum is the third review of employment in the Region which is similar in form to the previous documents which the Association has published, the others being in 1946 and 1948. The value of the report is that it brings into focus in one document most of the issues concerning the mining and industrial policy in the region, and serves to emphasize those problems which, though perhaps well known, are still unsolved, and in some cases, require urgent solution.

The English Electric Company's Activities—1950

The contribution of The English Electric Company to the mining and metallurgical industries in machinery and equipment both at home and abroad during 1950, was once more on a vast scale.

Since the beginning of 1950 the company received orders for mine hoists and haulage equipments from the National Coal Board, South Africa, West Africa and India on an increasing scale. The equipments concerned varied between 65 and 4,000 h.p. and the majority were a.c. driven hoists, utilizing the company's patented scheme of automatically compensated d.c. dynamic braking, and with the rotors connected in series for twin motor drives. An interesting conversion of an existing steam-driven hoist was undertaken during the year at a colliery in the U.K., in which an a.c. hoist motor was directly connected to a 6,600 volt three-phase 50 cycles incoming supply to the colliery, and this will be the first 6,600 volt installation in England. An order for a large Ward-Leonard hoist was placed for West Africa, and by the introduction of graded acceleration using English Electric Company's patented control exciter scheme, it was possible to dispense with a 40-ton flywheel, which would otherwise have been required to obtain load equalization. On practically all contracts control desks were, or are being, provided together with miniature decision type depth indicators.

Revised production methods, the company reports, have enabled the delivery period for mining type transformer switch units to be reduced, and a steady flow of orders for these units has been received. Flameproof type motors, including conveyor and coal-cutter motors, were also in increasing demand.

ORDERS FROM THE STEEL INDUSTRY

With regard to the supply of electrical plant to the metal industries, activity was considerable and orders received were predominantly from the steel industry.

At the Scunthorpe Works of Messrs. John Lysaght, Ltd., a large hot reversing mill drive was put into commission. The order was for a 42-in. blooming mill, with a peak rating of 6,658 h.p. at 62/150 r.p.m. (1,680,000 lb. ft. peak torque).

Practically all the electrical plant associated with this mill and in the motor room was also supplied by English Electric, including many contactor-controlled and Ward-Leonard-controlled auxiliaries, with distribution switchgear and fusegear.

Another hot mill reversing drive was commissioned for a 45-in. slabbing mill at the Abbey Works of the Steel Company of Wales. This equipment is the first twin drive in the British steel industry, and the largest reversing drive in Britain. Peak h.p. rating is 27,600, the speed 40/80 r.p.m. and the maximum torque 3,600,000 lb. ft.

Both these recent hot reversing drives include the company's latest control system, giving not only quick response but also voltage and current limiting, with automatic compoundings on excess loads. Special rapid-acting control exciters are employed and the same scheme is being applied successfully to many later equipments of all sizes.

Some years ago when the hot strip mill was installed at Messrs. John Summers' works, near Chester, The English Electric Company equipped all the main drives and also provided the control system for the hot strip flying shear. Electronic control equipment has been added recently, without alteration to the generators and motors; the accuracy of cutting strip into lengths has thereby been considerably improved.

A hot strip mill drive of interest was installed abroad for producing narrow stainless steel strip, and includes a set of air-operated loopers for automatic control of strip tension in the finishing stands; this is believed to be the first time that a control of this nature has been applied to a hot strip mill. The English Electric equipment in this scheme covered all the distributing switchgear and transformers in addition to the motors for the a.c.-driven roughing stand and the d.c.-driven intermediate and finishing stands; the total h.p. of all the main drives was 7,850. This company also supplied some 70 auxiliary motors, a.c. and d.c., aggregating about 1,500 h.p., and was responsible for nearly all the auxiliary control gear, the most interesting item being the automatic pre-setting screwdown equipment on the roughing mill.

A further cold tandem strip mill drive was supplied to the British Aluminium Company's works at Falkirk, making the fourth English Electric equipment installed there. The mill is a three-stand unit for aluminium and its alloys, of the latest design with extensive mechanical handling plant, and is one of the fastest cold tandem mills in Britain. The equipment covers all the main drives with their control gear and M.G. sets, also all the auxiliary drives on the mill and its coil-handling plant and for the common services, such as the oil-pressure systems. The company was responsible for the supply of all the electrical plant required by the mill. The mill motors are 500 h.p. units of 410/920 r.p.m., and the reel motor is a 194 h.p. unit with separate air-blower to minimize the motor inertia. A further single-stand cold mill drive will shortly be commissioned near this tandem mill, raising the number of the company's mill drives, in that works, to seven.

A reversing drive for a slabbing mill was delivered to the South African Iron and Steel Corporation's Vereeniging works. This drive is a repetition of two others in the same works, and while the rating of 300 metre tons at 54/120 r.p.m. might have been met with on armature, double armature construction was adopted partly on account of African railway loading-gauge restrictions, which would have hampered delivery of bigger motors.

TRANSFORMER UNITS FOR THE O.F.S.

Seventy M.V.A. three-phase 132 kV transformer units, having a larger capacity than any at present installed in the southern hemisphere, were ordered for the new Taaibos power station on the Orange Free State gold field. Many orders were also received for metal-clad indoor switchgear of various ratings, some of the largest of which for an atomic energy establishment, covered a 75 panel 11 kV 500 MVA switchboard.

A considerable increase in orders for medium and small industrial electric motors, mainly for driving colliery plant, machine tools, pumps, etc., were also carried out. Among the many orders received for railway locomotives and traction equipments, Imperial Chemical Industries ordered four complete 350 h.p. diesel electric shunting locomotives similar to the three which were supplied by English Electric in 1949. For the Australian Iron and Steel Company, eight 800 h.p. diesel electric units and electrical equipments for use in heavy duty shunting locomotives to operate at the Port Kembla works, were supplied. These locomotives are of the double-bogey, single-end cab type, and weigh 87 tons in working order. Their mechanical parts were built by Australian firms to the designs of the Australian Iron and Steel Company.

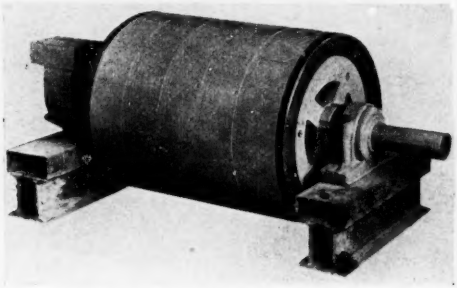
The above review of the activities of English Electric Company is not intended to convey, by any manner of means, the whole range of machinery and equipments supplied by this company throughout the world, but rather is it intended to give some idea of the important position which this company occupies in the development of the mining and metal industries.

Machinery & Equipment

Davies Magnetic Pulley

The use of a magnetic pulley at the head of a conveyor system is, of course, generally accepted as the best method for the extraction of tramp iron from a large tonnage feed, and wherever material is fed to a primary crushing unit, care should be taken that tramp iron is not included with the gangue. Davies Magnet Works, Ltd., Ware, Herts., England, have recently issued a leaflet describing important constructional details basic to their range of magnetic pulleys, and the makers state that the Davies magnetic pulley design ensures that a maximum field is obtained with a low energizing current giving a greater feed tonnage with lower kilowatt hours.

The main body of the Davies magnetic pulley is formed from low carbon annealed sections, giving a closed magnet circuit, free from air gaps, while all the available area of the pulley face is utilized, as no air spaces are allowed between the coils, so permitting a very high number of ampere turns per inch of pulley face, yet without any marked heat increases in the coils due to iron losses caused by passing a magnet circuit through a yoke of uneven cross section. All coils are impregnated and baked for continuous rating under tropical conditions and are treated with anti-fungazide. The magnets are of horseshoe design with deep



Davies Magnetic Pulley—Model 41

coils, and dead spots on the face of the pulley are eliminated by the application of alloy steel coil covers which ensure an equal distribution of the magnet flux without neutral areas. Coil leads and heavy V.I.R. cable are given extra protection in P.V.C. casings, and are joined separately to rigid mounted buss bars, which have fixed leads to well insulated oversize copper sliprings carried in a cast casing, with spring loaded dynamo carbon brushes. The main shaft is of extra heavy section to withstand high belt loadings and torque stresses, without distortion, thereby giving a maximum mechanical strength to the pulley. The magnet formers are attached direct to this heavy driving shaft and the whole body of the pulley is fixed by deep seated keys to the main shaft and positioned between shoulders to offset any side movement.

To enable operators and mining engineers to select suitable magnetic pulleys with full knowledge of the dimensions and electrical characteristics, a tabulated list of ores with the average cubic footage per run of mill feed, due allowances having been made for voids, is also contained in this leaflet. In this connection the makers point out that while every endeavour has been made to give data as accurately as possible, it will be appreciated that the cubic foot weights are variable according to mesh, but the tabulated figures approximate for the feed to a primary crusher. Furthermore, attention is drawn to the capacities scheduled in the list of standard pulleys which are the maximum permissible for crusher protection.

Atomic Radiation Detector

A new atomic radiation "monitor," which permits direct radiation readings at a glance, has been developed by the General Electric Company, New York. The detector weighs less than a pound and is no longer than a quart oil can. It has neither cathode tubes nor batteries and is equipped with a self-contained power source.

Machinery and Metallurgical News from the Mines

From the Frontino Gold Mines, situated in the Province of Antioquia, Republic of Columbia, South America, comes a report stating that a new sorting belt and a new Traylor "TY" crusher has been installed. The crusher, which was in operation by the end of October last, has had little opportunity to show itself to advantage as an exceptionally heavy rainfall in the middle of that month, which caused widespread damage, adversely affected mining operations. However, work is continuing on the installation of screens and a bucket elevator, and when this is completed the crushing plant should be an economic unit working efficiently and producing the desired increase in tonnage. In addition, a new 16 in. by 24 in. Denver jig has been installed with necessary pumping and laundering, in order to relieve the overload on the concentrate table, and will prevent an excessive amount of sulphides entering the leaching plant.

At Pahang Consolidated, two new Ingersoll-Rand compressors have been installed and these, it is reported, should help materially assist in development work.

From Mount Morgan, in Queensland, Australia, it is reported that additions made to the equipment in the machine-shop include a new No. 4 Universal milling machine, a No. 4 A Mars turret lathe, one new 6-in. engine lathe, one 2-ton air hoist, a 3-ft. sheet metal workers' folding machine, and an ending and swaging machine. Three additional second-hand Caterpillar D.8 bulldozers were rebuilt and put into service. Construction work at the mine, for which the final working drawings are not yet completed, though for which advance orders have been placed for materials, include a third pulverized fuel boiler, a new ring steam main and a second 5½-ft. Symons cone crusher at the No. 1 mill crushing station.

Interesting and, indeed, topical is the further news from Mount Morgan that the company's research department is to examine the possibilities of economic use of the sulphur contained in the mine's ore bodies. Several lines of investigation have already been opened up and it has been shown that a useful concentration of sulphur can be effected by heavy media separation of the ore at relatively coarse sizing, and 20-ton samples of ore have been carefully selected and sent to specially equipped laboratories in England and the United States. The reports from these authorities have confirmed the results obtained at the mine. Further "Sink-Float" test work is being carried out to investigate its application in other directions.

New U.S. Midget Locomotive

An American firm has demonstrated a midget locomotive weighing only 6,000 lb., reports Reuter. The "Trackmobile" has been designed to meet the demand from railroad car shops and industrial plants for a moderate price locomotive for moving cars. It is powered by a 60 h.p. automobile type engine and can run on rails or on the ground and has conventional rail wheels for track use and small rubber tyred wheels for use when it runs on the ground. Hydraulic devices raise or lower the wheels to permit the necessary changes. The manufacturers, the Whiting Corporation of 15613, Lathrop Avenue, Harvey, Chicago, claim that it has moved as much as 90,000 lb., or 150 times its own weight.

Metals, Minerals and Alloys

Since our last report (*Mining Journal*, December 22, 1950), attention has centred on Government controls of metal supplies in the United States and Great Britain. In the U.S., at any rate restriction will be progressive looking towards complete government control of all supplies and uses by the late summer, but these arrangements, if the industrial economy of the country is not to suffer unduly necessarily take time to finalize, and severe controls are not expected before February. It seems probable that the Ministry of Supply control arrangements will *mutatis mutandis* be in line with the American practice. The Minister of Supply told a Press Conference on Thursday of last week that overall supplies of zinc are to be cut by 40 per cent of the consumption in the first nine months of the year, which amounted to 243,983 tons. Allocations would be made on a monthly basis, and from February 1, supplies of g.o.b., metal are to be reduced to 50 per cent; of electrolytic to 70 per cent, except for brass which will be 85 per cent; with high grade zinc also at the last-named figure. He forecast early price controls of scrap. In the United States, the N.P.A. will, it is understood, generally adopt the same plan; meanwhile hoarding of antimony, asbestos, cadmium, cerium, chromium, cobalt, columbium, copper, industrial diamonds, lead, magnesium, manganese, mica, molybdenum, nickel, platinum, talc, tantalum, titanium pigments, tin, tungsten, vanadium, zinc, zircon and non-ferrous scrap are prohibited by a decree of December 28.

Copper.—The U.S. official price remains at 24½c., with 26½c. for imported copper. Mr. Louis S. Cates has declared that a roll back in the price is inconceivable, and would curtail vital imports. Strong demand from consumers has continued, owing, principally to their desire to improve inventories before fuller controls are imposed. Sales in December were approximately 110,000 s.tons, with January estimated at perhaps 60,000 s.tons. Copper fabricators consumed 128,790 s.tons of refined in November (128,202 in October). President Truman will again press for a renewed suspension of the Copper Duty when Congress meets later this month. N. Rhodesian output in October was 23,009 tons.

U.K. imports of copper in November were 20,330 tons (17,830 electro, 2,500 blister), as compared with 27,599 tons in October.

U.K. stocks of copper declined substantially during October; the total at the end of the month being 103,384 tons compared with 120,413 tons at the beginning, according to the British Bureau of Non-Ferrous Metals statistics. November consumption was 52,168 tons and for the 11 months, 478,038 tons against 457,878 a year ago.

Lead.—No change is expected in the U.S. official price of 17c. per lb. for lead, when the January delivery books are opened, in view of the prospective price hearings, to be held shortly in Washington. The increase in export duty is apparently not yet reflected in the quotation. Domestic demand remains far in excess of supplies, with some consumers prepared to pay a premium for custom smelter metal. Mexican lead has been done in good volume around 18½c., f.a.s. Gulf Ports. Mr. Andrew Fletcher, President of the St. Joseph Lead Co. has estimated the United States domestic mine production last year at around 425,000 s.tons, or some 21,000 s.tons up on the year. Production from scrap he put at 380,000 s.tons (5,000 tons down). Imports would be around 520,000 s.tons, giving a total available supply of + 1,300,000 s.tons. Consumption, he estimated around 1,200,000 s.tons, or about 340,000 s.tons above 1949. This consumption estimate did not include stockpiling, which would bring supply and demand practically into balance. While military requirements for lead are not large, lead my be in increased demand in substitution for copper, zinc, tin and aluminium.

U.K. imports in November were 8,506 tons compared with 14,592 in October.

U.K. stocks of lead declined to 65,102 tons at the end of November compared with 72,044 tons at the beginning of the month. November consumption was 31,514 tons making a total for the 11 months of 301,728 tons.

Tin.—Business in tin was restricted in the U.S. over the holiday influenced by a general apprehension that the R.F.C. may be made the sole importer of the metal. Meanwhile buying has been concentrated in Singapore in view of the difficulty of buying in London. The U.S. price on Wednesday was 152c.; the London and Singapore price appears below. U.S. consumption for civilian uses will be cut by 20 per cent of the rate of consumption in the first half of last year, from the beginning of next month. This figure is computed at 33,538 tons, suggesting a civilian consumption for the year of 53,660 tons, compared with around 73,000 tons last year. It is reported that the R.F.C.-Bolivian tin contract has been extended for two months as it was not possible to arrive at an agreement at the beginning of the year. Congo output in November is given as 1,054 tons and of Malaya at 4,696 tons. At a meeting of the Beatrice Gold Mining Co. in Johannesburg last week it was reported that efforts are to be made to develop tin deposits in the Waterberg district, by a company to be called Union Tin Mines Ltd.

U.K. metal imports in November were 510 tons compared with 600 tons in October. Concentrate imports were heavy at 7,070 tons of which Bolivia furnished 4,412 tons. Bolivian arrivals for the eleven months total 28,068 tons; as the total Bolivian export of metal for the first ten months was 25,258 tons, it would seem as though a considerable amount of low-grade concentrates had come to Britain.

U.K. stocks of tin metal at the end of November were 7,921 tons compared with 7,868 tons a month earlier. Consumption was 2,156 tons, of which tin plate required 45.9 per cent. Consumption for the 11 months of last year was 21,141 tons against 18,217 tons a year earlier.

Zinc.—The zinc famine continues to be emphasized. The Minister of Supply at his conference last week held out no hopes of increased supplies from Belgium, and though he hoped that we might get some additional supplies from the United States, the trade there estimates that of the 980,000 s.tons of concentrates required for 1950, available supplies were only 847,000 s.tons. Domestic consumption in November was 84,243 s.tons against 81,491 s.tons October. Meanwhile the Government is deaf to complaints from consumers who ask for temporary postponement of deliveries into stockpile. The official price remains at 17½c., sellers being afraid to advance the price in view of Government pronouncements.

U.K. imports of zinc in November were 13,418 tons (7,768 tons in October). Australia supplied 7,200 tons, U.S.A., 2,670 and Canada 1,433 tons. Concentrates totalled 16,004 tons (20,529 tons in October).

U.K. stocks of zinc declined in November to 37,308 tons against 40,981 tons a month earlier. Consumption for the month was 29,869 tons, making the total for the 11 months 303,717 tons against 260,379 tons a year ago.

Aluminium.—The U.K. price of aluminium has been advanced by £4 to £124 per ton. November imports were 12,619 tons, almost wholly from Canada (October, 19,574). Bauxite imports were 12,900 tons.

Cobalt.—The N.P.A. ordered at the end of last week what was practically a complete allocation of cobalt in all

forms to take effect at the beginning of next month. U.K. imports in November were 175,813 lb. as against 298,500 lb. in October.

Cadmium.—The N.P.A. has issued an order prohibiting the use of cadmium except in the manufacture of a specific list of products, where its non-corrosion qualities are essential. All inventories are limited to a 30 days supply. U.K. imports of cadmium in November were 126,243 lb. against 25,760 lb. in October.

Quicksilver.—The price of quicksilver at the beginning of the week was advanced to £48 per flask and in the United States to $155/157. It is understood that the rise is due to a further advance in the Spanish quotation to $130 f.o.b. U.K. imports in November are reported as 22,841 lb. against 30,400 lb. in October.

Wolfram.—The wolfram price has continued to advance rapidly in the acute shortage of supplies, and we call the price this week around 420s. per unit. The United States price has been advanced to $52½ per s.ton unit. U.K. imports of concentrates in November were 353 tons, of which 183 tons came from Portugal. The October import figure was 413 tons.

Platinum.—There is nothing to report in the metals of the platinum group since our last, and prices are unchanged.

The Rhodesian Herald anticipates that Southern Rhodesia may become an important world producer of platinum, and states that a leading British firm of consultants have succeeded in recovering platinum from a test sample of several tons sent from the Colony. Hitherto a satisfactory treatment method has been wanting. An exclusive prospecting order over 70 square miles in the Belingwe district has been granted by the Government to a syndicate and the Rhodesia Great Dyke Development Exploration Co. is prepared to erect a pilot plant. At least 80,000,000 s.tons of ore containing nickel, copper and platinum metals are said to be available.

The London Metal Market

(From Our Metal Exchange Correspondent)

The main event this week has been the diminution of the backwardation from the high peak of just over £200 which existed on December 19: this has been brought about by fairly heavy offerings of cash tin, and it is hoped that these may continue for sufficient time to stabilize the margin between cash and forward metal at a reasonably low figure. Official stocks of tin have shown a further sharp increase, but most of this is understood to be caused by the arrival of more Ministry of Supply owned tin, and although at the Minister's recent Press conference it was not confirmed that these holdings would be used as a strategic stockpile, such a course of action is believed to be most probable. Exports of English tin in November at 790 tons were still in excess of the tonnage which can be spared from this country in view of the small margin between the smelters' output and the rate of current consumption, and the December figures are eagerly awaited to see whether the situation improved to any extent during that month.

As for other metals, there are continuous additions to the list of orders curtailing their use, both in the U.S. and in the U.K., and it is expected that further measures will have to be taken to limit civilian production as the allocation of armament orders gains momentum. This is especially the case with zinc, in which metal the Government bulk-buying policy has failed so signally to produce the necessary metal to keep industry going, even at three-quarter speed, and while it is agreed that the situation created by the Korean war has done much to aggravate the non-availability of this metal to industry, it must be remembered that the war started last summer.

On Thursday the official close on the tin market was:—Settlement price £1,175, Cash buyers £1,170, Sellers £1,175; Three Months' Buyers £1,140, Sellers £1,145. In the afternoon the market was firmer. Turnover for the day was 150 tons. Approximate turnover for the week was 755 tons.

The Eastern price on Thursday morning was equivalent to £1,210 15s. per ton c.i.f. Europe.

Iron and Steel

The New Year opens with the prospect of an intensified home and export demand for iron and steel. Both British and American producers have achieved new production records in 1950, and are capable of even greater achievements in the next twelve months. There is, moreover, no doubt whatever that the market can absorb all the material that may be produced. Re-armament on a prodigious scale will involve heavy claims on the outputs of the steel plants, and these will no doubt be accorded first priority. But civilian demands are also heavy. Shipbuilders, for instance, booked in 1950 orders for new tonnage amounting to over three times the tonnage booked in 1949. Power plant producers are working to the limit of their capacity. Marine and constructional engineers have at least a full year's work in sight and overseas orders for locomotives, wagons, pipe lines and railway equipment are piling up.

All this does not mean that the outlook for the iron and steel industry is cloudless. To keep this enormous productive capacity in full operation requires an amplitude of raw materials. More fuel, more iron ore, more scrap. Whence are these to come? More steel is being produced on a smaller coal consumption, but the blast furnaces must have coke which is in lamentably short supply. Ore imports are reasonably good but freights are moving steadily against charterers of tonnage space and the scrap problem is acute. Already shortages of raw material have slowed down steel production in Scotland and the position elsewhere is becoming precarious.

Endeavours are being made to obtain more scrap from Germany and an intensification of the home scrap drive is indicated.

Shortage of zinc is another problem. A cut in the region of 50 per cent in the supplies to the sheet trade will stop the operation of many of the galvanizing pots and more consumers will have to be satisfied with black in place of galvanized sheets.

These, of course, are the not unfamiliar day to day problems of an industry whose flexibility is under constant test. It is no doubt an ill-chosen moment for the transition from private to public ownership which is due to take place next month. But the response of the steel industry to national requirements is not in doubt. Sir Ellis Hunter, president of the British Iron and Steel Federation, has aptly summarized the common task. "We must concentrate on still further increasing productivity in order to meet the urgent needs of defence and the call for exports . . . The coming year will call for renewed efforts if we are to meet the country's re-armament and export needs and, at the same time, implement our own development programme."

Tinplate.—Business in the tinplate trade has been comparatively inactive since the resumption of production after the Christmas holidays. The number of unfilled orders on makers' books at the end of the year covered 2,967,095 boxes compared with 2,451,724 a year ago, but makers are apprehensive of the restrictive effects on production of the shortage of scrap, now acute throughout West Wales. They fear the closing down of some steel furnaces unless supplies of all grades are rapidly increased, and are organizing a nation-wide search.

Coal

The coal supply position in the U.K. has worsened during the past fortnight. Thanks mainly to the increased contribution of the voluntary Saturday morning shift the deep mined output for 1950, at approximately 204,000,000 tons, exceeded the 1949 performance by about 1,500,000 tons, but fell short of the minimum target of 205,000,000 tons, while opencast supplies which were expected to reach 13,000,000 tons, totalled only 12,200,000 tons, thus raising the combined deep mined and surface output to about 216,250,000 tons as against the Government's forecast of between 218,000,000 and 233,000,000 to cover estimated requirements of between 199,000,000 and 201,000,000 tons for inland consumption and of between 19,000,000 and 22,000,000 tons for cargo exports and bunkers. The year's achievement is thus the least favourable, in its relation to opencast targets since the mines were nationalized.

JANUARY 4 PRICES

COPPER

Electrolytic	£202 0 0 d/d
Fire refined, high conductivity	£202 0 0 d/d
Fire refined, high grade	£201 10 0 d/d
Fire refined, ordinary quality + 99.7%	£201 0 0 d/d
Fire refined, ordinary quality + 99.2%	£200 10 0 d/d

TIN

(See Metal Notes above for Thursday's Metal Exchange prices)

LEAD

Soft foreign, duty paid	£136 0 0 d/d
Soft empire, including secondary lead	£136 0 0 d/d
English lead	£137 10 0 d/d

ZINC

G.O.B. spelter, foreign, duty paid	£151 0 0 d/d
G.O.B. spelter, domestic	£151 0 0 d/d
Prime Western	£151 0 0 d/d
Electrolytic and refined zinc	£155 0 0 d/d
Zinc (99.99% Zn)	£157 0 0 d/d
Sheets	£167 0 0 ex works
Zinc oxide (red seal)	£170 0 0 d/d
Zinc oxide (green seal)	£171 10 0 d/d
Zinc oxide (white seal)	£172 10 0 d/d

ANTIMONY

English (99%) delivered, 10 cwt. and over	£250 per ton
Crude, 10 cwt. and over	£195 per ton

NICKEL

99.5% (home trade) ... £406 per ton

OTHER METALS

Aluminium, £124 per ton.	Palladium (scrap), £7 10s. oz.
Bismuth, 17s. lb.	Platinum, £27/33 5s. nom.
Cadmium, 17s. 3d./18s. lb.	Platinum (scrap), £26 nom.
Chromium, 5s. 3d. lb.	Rhodium, £45 oz.
Cobalt, 15s. 6d. lb.	Ruthenium, £25 oz.
Gold, 248s. f.oz.	Quicksilver, £48 nom. ex. warehouse.
Iridium, £55 oz. nom.	
Magnesium, 1s. 6d. - 2s. lb. according to quantity.	Selenium, 25s. nom. per lb.
Osmiridium, £30 oz. nom.	Silver (bar), 70d. f.oz. spot and forward.
Osmium, £70 oz. nom.	Tellurium, 14s. 4d. lb.
Palladium, £8 10s. oz.	

ORES, ALLOYS, ETC.

Bismuth	30% 5s. 10d. per lb. c.i.f. 20% 3s. 6d.
Chrome Ore	Nom.
Magnesite, ground calcined	£25 - £26 d/d
Magnesite, Raw	£9 - £10 d/d
Manganese, Best Indian	(Nominal)
Molybdenite (85% basis)	(Nominal)
Wolfram (65%), U.K.	420s.
U.S.	$52½
Tungsten Metal Powder (for steel manufacture)	26s. 4d. nom. per lb. (home)
Ferro-tungsten	24s. 4d. nom. per lb. (home)
Carbide, 4-cwt. lots	£30 18s. 9d. per ton
Ferro-manganese, home	£30 5s. 11d. per ton
Ferro-manganese, export	Nom.
Brass Wire	2s. 2¾d.
Brass Tubes, solid drawn	1s. 9¾d.

Mining Men and Matters

Mr. Arthur Colgate, M.P., has been elected to the Tanganyika Concessions United Kingdom Ordinary Stockholders Committee.

Col. Sir Arthur Evans has resigned from the board of Nigel Van Ryn Reefs.

Mr. J. H. Lascelles has been appointed a director of Rhodesian Selection Trust.

Sir George R. Macfarlane Reid has been appointed a director of Phoenix Prince Gold Mining.

Mr. Lute J. Parkinson has been awarded the Colorado School of Mines Distinguished Achievement Award.

The Institution of Chemical Engineers will hold a meeting on Tuesday, January 9, 1951, at 5.30 p.m. in the apartments of the Geological Society, Burlington House, Piccadilly, London, W.1, to hear a paper by Mr. C. J. Stairmand on "The Sampling of Dust Laden Gases." Professor D. M. Newitt, president of the Institution, will take the chair.

Roberts Victor Diamonds, Ltd. (Incorporated in the Union of South Africa), have announced that the reconstituted board of the company is as follows: Messrs. W. S. Crichton, B. Fredman, J. N. Getz, R. E. Haxton, H. Norbye and Dr. B. Bessarabia.

New Year's Honours List.—Among the Knighthoods conferred in the New Year's Honours List of particular interest to readers of *The Mining Journal* will be the award of the K.B.E. on Mr. James Moir Mackenzie, Deputy Director-General, Federation of British Industries, for services to the Commonwealth Economic Relations. The C.B. was conferred upon Mr. E. Barnard, Deputy Secretary of D.S.I.R. and Mr. E. W. Ravenshear, Under Secretary of the Ministry of Fuel and Power. Among those who received the C.B.E. are: Mr. W. L. M. O'Connor, Director of Carbonisation, N.C.B.; Mr. J. F. Thorn, mining engineer, for services to the Gold Mining Industry in Western Australia; and Mr. Robert Yates, Deputy Chief Inspector of Mines, Ministry of Fuel and Power.

O.B.E.'s have been conferred on: Mr. A. MacAlpine, president, National Association of Colliery Overmen, Deputies and Shotfirers; Mr. H. L. de Bourcier, principal, Ministry of Fuel and Power; Mr. E. H. Clark, mining surveyor, Ministry of Fuel and Power: Mr. L. Clegg, Regional Fuel Officer, Ministry of Fuel and Power; Mr. A. E. Dawson, assistant mining agent, No. 4 area, N. (Northumberland and Cumberland) Division, N.C.B.; Mr. D. C. Gemmell, manager, Muiredge Training Centre, Scottish Division, N.C.B.; Mr. J. B. Hodges, Higher Executive Officer, Ministry of Fuel and Power; Mr. S. L. Hopkinson, manager, German office, British Iron and Steel Corporation; Mr. A. Lowe, manager, Chanters Colliery, North-Western Division, N.C.B.; Mr. A. MacDonald, works manager, North British Locomotive Co., Ltd.; Mr. R. Marchbank, Regional House Coal Officer, Scotland; Mr. H. V. Pollard, Senior Experimental Officer, D.S.I.R.; and Mr. G. R. Taylor, senior executive officer, Ministry of Fuel and Power.

OBITUARIES

DR. CHARLES ENGELHARD

The death occurred in New York at the beginning of December of Dr. Charles Engelhard, President of Baker & Co., Inc., at the age of 83. Dr. Engelhard's name has been a household word in the platinum trade for many years. Originally he was associated with his brother-in-law, Heraeus at Hanau in Germany, and he migrated to the United States sometime before the First World War. There he organized the business of two small concerns which were merged in what became Baker & Co., and were managed from Hanau. After the First World War the German connection was severed and Dr. Englehard gradually developed the business into the dominant position which it occupies to-day. Dr. Englehard's annual reviews of the platinum metals have long been a feature for the platinum trade and his son and successor in the present field of the latter company, Mr. C. W. Englehard, has just issued the review for last year.

MAJOR E. SEABORN MARKS

The death occurred at his home Haywards Heath, on Boxing Day of Major Edward Seaborn Marks, well known in connection with alluvial mining, and Chairman of several West African companies.

Major Marks studied at the Royal School of Mines where he secured his diploma of A.R.S.M. in 1896. The following year saw him engaged in dredging and alluvial mining in Australia where he remained until 1905. In 1906 he established a consulting practice in London. He served throughout the First World War from 1914-1918, retiring with the rank of Major and a mention in despatches. Later he was awarded the O.B.E. He was a member of the Institute of Mining and Metallurgy and a Fellow of the Geological Society.

The Mining Markets

(By Our Stock Exchange Correspondent)

As there was no financial column in last week's issue of *The Mining Journal*, due to the closure of markets over the Christmas holidays, price movements and copy refer to the whole period from December 22. On January 1 the Stock Exchange Council ratified the restoration of dealings for "New Time." This enables investors to buy or sell shares for settlement in a certain account, four days before the expiration of the old account. This move will greatly facilitate the handling of large blocks of stock towards the end of an account. The holiday period has as usual proved a very quiet one for the House, and very little turnover is reported.

The announcement on Tuesday of an increased interim dividend by Shell Transport & Trading from 2½ per cent tax free to 5 per cent tax free had a galvanic effect on markets when dealings started for the new account on Wednesday. Concurrently Royal Dutch Shell declared an interim dividend of 4 per cent, the first since 1938. Two large cement companies announced increases at the same time. The significance of this lies in the fact that these industrial giants have at last broken away from the strict letter of dividend limitation, and now that the plunge has been taken other concerns may well follow their lead. This move led to all round gains in oil shares, and even Anglo-Iranian recovered some of the ground recently lost.

Kaffirs have been patchy over the period, but generally closed firmer with a better undertone all round. This tendency has been helped by a revival of interest in gold in Johannesburg. The December Rand returns show the usual holiday period decline in profits. City Deep, however, shows a good recovery from last month's poor figures, when pressure bursts reduced output. Robinson Deep returns show a reduction in working profit of nearly £10,000. This is due to a serious underground fire on November 25, as well as three severe pressure bursts. Developing mines in the Orange Free State have, however, declined almost without exception. Public interest in this type of property is at a very low ebb, as many investors are adopting a "wait and see" attitude on political uncertainties.

Diamond shares have remained very steady. A "bull" factor in this market is of course the continued upward spiral of inflation due to the world wide rearmament programme.

Eastern tin shares have again declined, more on the worsening political situation in the Far East, than on the fall in the price of the metal. By contrast Nigerian tin shares, where changed, have hardened. Beralt Tin & Wolfram and Central Provinces Manganese both improved on the continued world shortage of wolfram. Wankie Colliery shares have also been in demand.

The star turn during the fortnight has been base metal shares. Government announcements in the United States and Britain during the past weeks concerning reimposed restrictions on the civilian consumption of zinc, brass and copper, have driven home to investors the chronic shortages that are being created by rearmament programmes. Coppers have shown substantial all round improvements, those companies which have recently emigrated being favoured above others. Certainly these mines seem assured of a demand for their maximum output during the next few years. Market circles anticipate 1951 as being a bumper year for these concerns.

Lead/Zinc shares have also had a good showing after the uncertainties of the autumn. Lake George Mines have been outstanding in a strong market. Readers will no doubt recall that this mine is not affected by the low internal price of lead in Australia, as the bulk of its ore is sent abroad to Continental smelters. Business circles anticipate an increasing demand for lead, and the technical position of the metal is considered to be much stronger.

	Price Jan. 3	+ or − on week
FINANCE		
African & European	51/3	
Anglo American Corpn.	6⅜	+⅛
Anglo-French	23/1½	
Anglo Transvaal Consol.	32/6	+1/3
Camp Bird	14/9	+7½d
Central Mining (£1 shrs.)	43/9	+1/10½
Consolidated Goldfields	2⅛	−⅛
Consol. Mines Selection	30/7½	+7½d
East Rand Consols	4/4½	−3d
General Mining	5⅛	−⅛
H.E. Prop	37/6	+1/3
Henderson's Transvaal	10/-	
Johnnies	3⅛	−⅛
Rand Mines	7½	+⅛
Rand Selection	36/3xd	
Union Corporation	10⅜	−⅛
Vereeniging Estates	5⅛	+⅛
Wits.	27/6	−7½d
West Wits.	2⅛	−⅛
RAND GOLD		
Blyvoors	48/9	+7½d
Brakpan	20/9	−3d
City Deep	3¾	+⅛
Consol. Main Reef	2⅛	
Crown	5⅛	+⅛
Daggas	3⅛	+⅛
Dominion Reefs	1/9	−3d
Doornfontein	25/9	−6d
Durban Deep	3⅛	
E. Daggas	28/1½	
E. Geduld ... (4/- units)	2½xd	+⅛
E. Rand Props	3½	+⅛
Geduld	7½xd	
Grootvlei	37/6xd	+7½d
Libanon	17/3	−3d
Luipaards Vlei	21/6	+3d
Marievale	21/-xd	−3d
Modderfontein B	5/3	+3d
Modderfontein East	2⅛	+⅛
New Kleinfontein	30/-	
New Pioneer	20/-	−1/10½
Randfontein	18/6	−6d
Robinson Deep	17/-	−6d
Rose Deep	33/9	−1/3
Simmer & Jack	6/9	−1½d
Springs	10/-	
Sub Nigel	4½	
Van Dyk	16/-	−6d
Venterspost	27/6	−7½d
Vlakfontein	22/-	−6d
Vogelstruisbult	24/6	+3d
West Driefontein	4⅛	−⅛
W. Rand Consolidated	41/10½	
Western Reefs	36/3	
O.F.S.		
Alpha F.S.A.	12/6	−1/3
Blinkpoort	20/-	−1/3
Central Mining F.S.	4/6	−6d
Freddies	14/9	+1/-
Freddies N.	8/-	−9d
Freddies S.	8/3	−6d
F.S. Geduld	2⅛	−⅛
Geoffries	16/-	−1/-
Harmony	13/9 Pr.	−6d
Lydenburg Estates	10/-	−7½d
Middle Wits.	17/9	−2/-
Ofsits	41/10½	−1/3
President Brand	20/7⅛	−1/3
President Steyn	16/-	−1/6
St. Helena	31/3	−1/10½
U.F.S.C. & G.	10/6	−3d
Virginia Deb.	80	+5
Virginia Ord.	9/-	−1/9
Welkom	40/-	−1/3
Western Holdings	2⅛	−⅛
WEST AFRICAN GOLD		
Amalgamated Banket	2/-	
Ariston	7/4½	−1½d
Ashanti	31/3	+3d
Bibiani	12/3	+3d
Bremang	3/6	
G.C. Main Reef	3/9	+1½d
G.C. Selection Trust	9/6	−6d
Konongo	2/4½	
Kwahu	4/-	
London & African Mng.	1/1½	
Lyndhurst Deep	1/1⅛	
Marlu	2/3	−1½d
Nanwa	1/-	−1½d
Taquah & Abosso	8/9	−3d
AUSTRALIAN GOLD		
Boulder Perseverance	5/3	+3d
Gold Mines of Kalgoorlie	18/6	−6d
Great Boulder Prop	7/6	−3d
Great Western Consol.	2/-	
Lake View and Star	21/6	−3d
Mount Morgan	20/9	+9d
North Kalgurli	19/-	−3d
Paringa	1/4½	
Sons of Gwalia	13/6	
South Kalgurli	9/6	+1½d
Western Mining	7/6	
Wiluna	11/6	+1½d
MISCELLANEOUS GOLD		
Cam and Motor	32/-	+6d
Champion Reef	9/6	
Falcon Mines	8/-	
Globe & Phoenix	22/-	
MISCELLANEOUS GOLD (contd		
G.F. Rhodesian	7/9	+3d
London & Rhodesian	4/9	−1½d
Motapa	4/-	
Mysore	6/-	
New Guinea	1/-	−1½d
Nundydroog	7/3	−3d
Ooregum	3/1½	+4½d
Oroville	12/4½	
St. John d'El Rey	22/6	
Zams	33/9	−1/-
DIAMONDS		
Anglo American Inv.	3⅜	+⅛
Casts	32/9	+6d
Cons. Diam. of S.W.A.	3⅛ xd	−⅛
De Beers Defd. Bearer	52/9	−6d
De Beers Pfd. Bearer	17⅛xd	−¼
COPPER		
Chartered	67/3	+1/6
Indian Copper	5/-	+6d
Messina	95/-	+6/9
Nchanga	6⅛	+1⅛
Rhod. Anglo-American	52/9	+2/3
Rhodesian Selection	32/9xd	
Rhokana	20⅛	+1⅛
Rio Tinto	22¼	+⅛
Roan Antelope	18/1½	+4½d
Selection Trust	40/3	+3d
Tanks	41/9	+1/-
Tharsis Sulphur Br.	47/6	+2/6
TIN (Eastern)		
Anglo-Burma	4/9	−3d
Ayer Hitam	19/4½xd	−1/10½
Bangrin	18/9xd	−4/-
Gopeng	10/9	−3d
Hongkong	10/7⅛	−4½d
Ipoh	28/9	+7½d
Kamunting	9/-	−7½d
Kepong Dredging	11/6xd	−1/9
Kinta Tin Mines	13/9xd	−1/10½
Kramat Pulai	4/6	−3d
Malayan Dredging	20/-xd	−1/6
Pahang	10/6	−6d
Pengkalen	8/-	−3d
Petaling	10/1½	−1/1½
Rambutan	16/10xd	−7½d
Siamese Tin	14/-xd	−2/-
Southern Kinta	10/4½	−9d
S. Malayan	22/6xd	−2/3
S. Tronoh	19/6xd	−2/-
Sungei Kinta	14/4½	+1/3
Tekka Taiping	9/4½	
Tronoh	24/6xd	−2/-
TIN (Nigerian and Miscellaneous)		
Amalgamated Tin	11/4½	
Beralt Tin	19/9	+3d
Bisichi	3/6	+1½d
British Tin Inv.	15/9	−10½d
Ex-Lands Nigeria	7/1½	+6d
Geevor Tin	14/6	+4½d
Gold & Base Metal	3/4½	
Jantar Nigeria	4/10½	
Jos Tin Area	11/3	
Kaduna Prospectors	5/6	+3d
Kaduna Syndicate	10/4½	+4½d
London Tin	4/7½	−3d
Ribon Valley	1/-	−1½d
United Tin	1/7½	
SILVER, LEAD, ZINC		
Broken Hill South	50/-	+3/6
Burma Corporation	3/9	−1½d
Consol. Zinc	32/-	+9d
Lake George	26/3xd	+2/6
Mining Trust	4/7½	+7½d
Mount Isa	36/3	+1/3
New Broken Hill	30/-	+9d
North Broken Hill	72/6	+3/6
Rhodesian Broken Hill	19/1½	+9d
San Francisco Mines	63/9	+1/9
Trepca	3/4½	
MISCELLANEOUS BASE METALS & COAL		
Amal. Collieries of S.A.	2½	−⅛
Associated Manganese	75/3	−1/3
Chinese Engineering	2/6	
C.P. Manganese	49/6	+2/-
Natal Navigation	4⅛	
Wankie	22/7½	+1/4½
Witbank Colliery	4¼	−⅛
CANADIAN MINES		
Dome	$25xd	+1
Hudson Bay Mining	$10/5	−3
International Nickel	$69½	+½
Mining Corpn. of Canada	£6½	+½
Noranda	$136	
Quemont	£8½	+⅛
OIL		
Anglo-Iranian	5⅛	−⅛
Apex	40/7½xd	+7½d
Attock	23/9	
Burmah	55/-	+1/3
Canadian Eagle Bearer	30/9	+9d
Mexican Eagle	19/1½xd	−2/7½
Shell	3⅛	+⅛
Trinidad Leasehold	22/6	−10½d
T.P.D.	25/-	−6d
Ultramar	22/10½	+2/10½

Company News & Views

Outlook for Lake George Mining

In spite of the Australian general coal strike, which caused a two months' stoppage of mining operations at Lake George Mines Pty., Ltd., the wholly owned lead-zinc-gold-silver-copper and pyrites producer of Lake George Mining Corporation, group profit at £498,813 for the year ending June 30, 1950, contrasted well with the 1949 figure of £324,843. The profit figure looks even better when it is considered that the mine was only worked for 218 days and the mill for 265 days, so that given reasonably trouble-free periods and the maintenance of present high prices for base metals, the outlook for this company is a bright one indeed. Be that as it may, and it would be hard to find sound reasons for arguing to the contrary, no amount of comparison with last year's figures will provide the clue as to the share of prosperity which the company can expect to receive. For in the 1948-1949 period mining operations were carried out on only 67 days and milling operations for 80, but profit in that period (£324,843) was largely due to the sale of accumulated stocks of concentrates on hand and in transit at July 1, 1948, at prices in excess of their estimated value at that date.

However, a good guide as to the company's possibilities for the current year can be gathered from the 1949-1950 output figures compared with those of 1947-1948—the last full working year. Lead 6,545 tons against 7,061 tons, zinc 11,190 tons against 11,827 tons, copper 738 tons against 619 tons, silver 156,393 oz. against 151,592 oz. and gold 3,921 oz. against 4,390 oz.

While it is difficult to state with any degree of accuracy just how much the combined revenue would be from the sale of outputs comparable to either of the above years, present metal prices and political conditions point to this Australian producer making 1951-1952 a banner year. Another point in its favour is that the company ships its lead and zinc concentrates to Belgium and the U.K. respectively, thereby escaping the low ceiling prices in Australia.

In paying an interim dividend of 1s. and a similar final dividend, absorbing a total amount of £122,100, Lake George Mining Corporation has for the first time since its formation in 1937, entered the list of dividend payers. The carry forward amounted to £85,954 against £79,591.

Ayer Hitam Tin Dredging Results

Ayer Hitam Tin Dredging recovered 727 tons tin for the year ended June 30, 1950, compared with 652 tons in 1949, but proceeds from ore sales were down at £265,981 against £273,882. In this connection it may be remembered that last year's figure was increased by £51,000 realized on the 1947 production. Gross revenue registered a similar reduction, the figures being £278,708 against £283,584 in 1949. Mining expenditure was lower at £95,610 (£99,333), and after deducting this and other expenses working profit amounted to £169,615 to which was added £1,503 resulting from a taxation adjustment, making a total operating surplus of £171,118. From this amount, taxation called for £98,689 (including £54,500 provided for 1951-1952 taxation), losses on realization of investments required £2,822 and prospecting £9, giving a net balance of £69,598 (£93,316). To this figure was added £61,985 brought in, making £131,583 (£126,351) available. Dividend payments on the 5s. shares totalled 60 per cent (65 per cent) absorbing a net amount of £59,400, leaving the carry forward higher at £72,183 against £61,985. Net current assets as at June 30, 1950, amounted to £350,190. Mr. G. W. Simms is chairman.

Sungei Besi Makes Good Progress

The report and accounts for the year ended March 31, 1950, of the Sungei Besi Mines, the largest opencast tin mine in the world, reveal that a good deal of hard work has been carried out in restoring the mine to its condition prior to the Japanese invasion, at which time the key machinery of the mine was dynamited.

Repairs to the mine slopes and the removal of the slime and silt washed down into the excavations made by the Japanese was a major operation during the year. Good progress has been made, and the rich ground lying below the slime and silt is now being uncovered as the work proceeds. Rehabilitation was completed on Nos. 5 and 10 inclines, five mechanical shovels are in full operation, the second 1¼ yd. excavator was repaired during the year, and the yardage removed was nearly double that of 1949. On No. 8 incline an endless haulage system was substituted for the double drum winch in April, and this was followed by the installation of a conveyor belt system in the following month to take overburden from the main inclines to the dump, which greatly increased the company's facilities for handling yardage.

The profit and loss account showed that gross revenue amounted to £391,611 (£329,861); expenses £195,660, and working profit £195,951 (£175,683). Taxation called for £105,897, including £66,600 provided for 1950-1951 taxation. After taking all other items into account, net profit was £91,153 (£82,844), to which was added £49,039, making £140,192 available against £103,004 in 1949. Dividend payments on the 4s. shares totalled 65 per cent (60 per cent) absorbing a net amount of £58,462, the sum of £29,664 (nil) was transferred to reserves, and the balance remaining, £52,006 (£49,039), was carried forward.

Malayan Tin Dredging's Reduced Output

During the year ended June 30, 1950, Malayan Tin Dredging treated 4,823,000 cu. yd. of ground yielding 565.9 tons tin, compared with 6,449,000 cu. yd. yielding 1,101 tons. In addition, 17.1 tons (51.7 tons) were recovered from amang dumps and 43.5 tons (156.4 tons) from gravel pump mines operating on a tribute basis. This sharp drop in output was due to the sale of No. 1 Dredge to the Sungei Way Dredging, Ltd.; the increasing number of limestone pinnacles encountered at less than flotation depth by No. 5 Dredge working in the Batu Gajah section and the exhaustion of the virgin ground in the Ipoh Tin Sublease Area.

The profit and loss account tells the story of the difficulties experienced and gross revenue amounted to only £294,444 compared with £413,583 in 1949. Working profit was similarly down at £114,764 against £208,570. However, taxation was lighter, requiring £42,536 (£81,141) but this figure only allowed £300 against £30,500 to be provided for income tax in 1951-1952. The net balance totalled £75,454 (£131,278) to which was added £132,828 brought in, making £208,282 available Dividend distributions totalling 25 per cent on the 5s. shares (50 per cent) absorbed a net amount of £27,500. The carry forward amounted to £180,782, which compares favourably with the £132,828 brought forward in 1949.

The general manager stated that during the early part of the coming year a further reduction in the rate of output will be inevitable until No. 6 Dredge resumes operations and the Kampng Gajah section has been brought into production. This section contains a large proved yardage and when fully equipped with four dredges it is estimated that output will be about 3,000 tons per annum.

Work in the Kinta River deviation scheme was begun in January, 1950, and when completed the company will receive mining leases over part of the bed and reserves of the Kinta River estimated to contain 13,500,000 cu. yd. of profitable dredging ground.

Southern Malayan Tin Pays 80 per cent

During the year ended June 30, 1950, Southern Malayan Tin Dredging treated 13,095,000 cu. yd. of ground yielding 2,328.7 tons tin which compares with 10,202,000 cu. yd. treated yielding 1,576 tons tin in 1949. In addition, 78.4 tons (56.5 tons) were recovered from amang dumps and 138.8 tons (126 tons) from tribute gravel pump workings. The better results were reflected in the profit and loss account; gross revenue increased by £290,425 to £879,036; working profit of £574,049 contrasted favourably with the 1949 figure of £328,433 and after providing £316,594 (£171,608) for taxation (including £187,100 for 1951-1952 income tax based on profit for year to date) the balance was struck at £278,049. To this figure was added £86,201 brought in making £364,250 (£228,926) available.

Dividend payments totalling 80 per cent (60 per cent) on the 5s. shares absorbed a net amount of £190,300 (£142,725), the sum of £80,680 was transferred to general reserve bringing it up to £150,000 and the balance, £93,270 (£86,201), was carried forward.

Mr. Herbert Ashworth Hope is chairman.

Bangrin Tin Dredging Pays 8 per cent

With the payment of dividends aggregating eight per cent for 1949, Bangrin Tin Dredging Company enters the dividend list after an absence of eight years.

Gross revenue for the calendar year 1949 of £240,437 was more than double the corresponding figure for 1948, and although mining expenditure more than doubled, the figures being £123,908 compared with £53,605 in 1948, this latter increase was largely due to the fact that all three dredges were in operation throughout most of the year compared with only two dredges in 1948; increased wages and salaries, and the inclusion in the mining expenditure account of some £30,800 set aside for future care and maintenance of the dredges. The extra dredge won 209.88 l.tons, helping to boost output to 597.82 l.tons against 306.82 l.tons. Ore sales, less selling charges, realized £240,357, representing a selling price of £402.05 per ton.

Net profit before taxation was well up over the 1948 figure and amounted to £61,328 again £19,038. From the £73,164 (£32,465) available, taxation called for £41,370, the sum of £5,000 was transferred to the rehabilitation and war damage account, bringing this reserve up to £70,000 or approximately 29.8 per cent of the amount spent on rehabilitation and the unrecovered balance of Eastern current assets. These two items are subject to war damage claims but have not as yet been settled. An interim dividend of three per cent and a final of five per cent (nil) absorbed a net amount of £13,200, leaving the carry forward at £13,593 against £9,776 in 1948.

For 1950 the prospects are good, and the chairman, Mr. Kenneth O. Hunter, in his statement accompanying the report and accounts stated that "in consequence of some excellent monthly outputs, coincident with high tin prices in recent months, mining revenue for 1950 will be at least as high as any yet recorded."

Siamese Tin Increases Output

Mining expenditure of Siamese Tin Syndicate during 1949 increased by £182,529 to £299,823 but this was due chiefly to the inclusion of operating costs of its subsidiary, Siamese Tin Syndicate (Malaya); the working of three additional dredges; higher wages and salaries and the increase of some £60,450 charged to this account for future care and maintenance of the company's seven dredges.

The additional dredges worked resulted in an output of tin ore amounting to 1,445 tons against 921 tons in 1948, which sold for £405.41 per ton realizing £585,817 compared with £354,606 realized in 1948. The Siamese Government export duty accounted for 21 per cent of the proceeds or £106,476 on sales totalling £507,033, while the Malayan Government, on the 180 tons produced by the subsidiary, received 14 per cent, equivalent to £11,214 on sales totalling £77,884. After these and other charges had been deducted, including £16,820 charged for the subsidiary company's trading loss, net profit before taxation was £94,183 against £97,091 in 1948. From the £117,276 (£125,483) available, taxation required £65,280, rehabilitation and war damage account received £10,000, bringing the total set aside for this reserve to £110,000, representing 25 per cent of the amount spent on rehabilitation and the unrecovered balance of Eastern current assets. Both these items are subject to war damage claims but have not as yet been settled. Finally, the sum of £20,625 (net) was appropriated to meet the dividend payments aggregating 25 per cent (20 per cent) and the balance remaining, £21,371 (£22,536), was carried forward.

With reference to the current year, Mr. K. O. Hunter, chairman, in his statement said that in spite of output being lower than in pre-war days the high price of tin now prevailing may enable the company's revenue to be higher than in any year since 1937. In 1937 the company paid 65 per cent on a capital of £120,000; present issued capital is £150,000, divided into 600,000 shares of 5s. each.

Company Shorts

The Messina (Transvaal) Development Co. has announced that there is no truth in the rumour circulating to the effect that there will be a share bonus issue.

Central Norseman Finds Free Gold.—Central Norseman Gold Corporation N.L. has announced that the Princess Royal shaft intersected a flat reef at 403 ft., showing free gold. Six samples averaged 198 dwt. per ton over a width of 72 in.

Important Development at Esperanza Copper & Sulphur.—An important development in the Kinousa Section of the Limni Concession in Cyprus has been announced by the general manager, Mr. L. R. Jackson, who states that values of between 2.33 per cent copper and 4.16 per cent copper have been encountered with sulphur value of 48 per cent, and that this ore is suitable for direct shipment.

New Consolidated, Free State, Exploration Company have announced that Borehole No. N.D.1 situated on the farm Nieuwemoed 534 in a deflection drilled jointly with Free State Gold Areas Ltd. intersected the Leader Reef with complete core recovery at a depth of 4,176 ft. assaying 1.6 dwt. over a corrected width of 34.3 in. equivalent to 55 in.-dwt.

No further deflections will be made.

Harmony's Prospectus.—The prospectus of Harmony Gold Mining Co., the new O.F.S. developing mine, has now been issued by the parent company, Central Mining & Investment Corporation. Of particular interest is the report contained in the prospectus by the consulting engineer, Mr. F. G. Hill, who states that it is proposed to sink three shafts to open and develop the property. The sinking of two of these shafts commenced in August, 1950. Both are circular shafts with a diameter of 24 ft., and will be concrete lined. The Ventilation shaft, which is the more easterly of the two, is expected to intersect the basal reef at a depth below collar of about 4,200 ft., while in the second shaft—to be known as No. 3 shaft—the reef should be intersected at a depth below collar at about 4,800 ft. Once reef intersection occurs, development will take place from both shafts and as they are only 4,300 ft. apart, their connection underground should be accomplished in a relatively short time. The third shaft, to be known as No. 2 shaft, will be situated to the west of No. 3 shaft, and sinking will begin before initial production.

A considerable amount of preliminary work has already been done, Mr. Hill states, by Union Free State Coal & Gold Mines on behalf of Harmony. This work includes the construction of offices, stores, work shops, housing accommodation for Europeans and natives, and other essential buildings, as well as the erection of equipment, the installation of two shaft collars and a small amount of shaft sinking. Finally, Mr. Hill concludes by saying that "It is estimated that with intensive development, and assuming that faulting in the area is not abnormally severe sufficient payable ore will be made available for the commencement of milling at a rate of 40,000 tons per month during 1955, with good prospects of raising the capacity of the mine to 80,000 tons per month during the following year and of ultimately increasing the capacity to 160,000 tons per month."

WANKIE COLLIERY COMPANY

PLANS FOR INCREASING OUTPUT—MR. ROBERT FOOT'S SPEECH

The Twenty-seventh Annual General Meeting of The Wankie Colliery Co., Ltd., was held in London on December 28.

Mr. Robert Foot, O.B.E., M.C., the Chairman, in the course of his speech said:

I will deal first with the Accounts.

The successful issue in May of an additional 3,293,750 ordinary shares at a price of 12s. 6d. per share, provided the Company with the sum of £2,004,579 after meeting the expenses of the issue. This amount is now being used to meet the cost of the capital expenditure for the immediate expansion of the output of the Company.

The output of coal sold during the year was 2,142,355 tons, including a tonnage of 197,834 used by the Company for its coke ovens, brickworks and boiler plants.

The saleable output represents an increase of 238,280 tons over the previous year and an increase of well over 1,000,000 tons as compared with 1939. At the present time (December, 1950) the monthly production for sale is equivalent to an annual total of about 2,400,000 tons and the curve of increase is progressively upwards.

The total operations of the Company during the year resulted in a profit balance before taxation of £337,869 which compares with a figure of £288,050 for the previous year. Of this amount taxation absorbs £156,000 as compared with £165,281 last year, leaving a balance being profit after taxation of £181,869, as compared with last year's figure of £122,769.

The Directors propose to create a Taxation Equalization Reserve of £60,000 which will enable the Company to keep some reasonable form of balance between the annual depreciation provided in its own Accounts and the allowances granted for taxation purposes.

Of the balance of £121,869, the Interim Dividend of 3¾ per cent, paid in May last on the old capital, i.e., before the new issue, cost £34,289. The payment of a final dividend of 3¾ per cent will, if the Directors' recommendation is accepted, absorb £68,256 thus leaving £40,440 to be carried forward into the year 1950/1951 as compared with £21,116 brought into the present account from the financial year 1948/1949.

THE NEW MANAGERS

I now come to the special matters of importance.

First the decision taken by the Board to appoint Powell Duffryn Ltd. Managers of the Company under a long term contract. This appointment became effective as from May 1 last.

At the time of their appointment as Managers, Powell Duffryn were invited and agreed to subscribe a substantial amount of the new capital required for the development of the Company's properties. Following this appointment and investment, Mr. E. L. Hann, Mr. R. L. Lechmere-Oertel and I joined the Board. At the Extraotdinary General Meeting on April 26, Sir John Chancellor reported that Major A. J. Darby, who had been General Manager at Wankie for the past 16 years had decided to retire from that position on June 30 last, and, Mr. T. A. J. Braithwaite, a highly efficient and well trained Mining Engineer, was on the recommendation of the Managers appointed to take his place.

I wish to mention the recent resignation of Sir John Chancellor as Chairman and Joint Managing Director. Sir John's resignation is due to his own desire to be relieved of the increasing responsibilities which under present conditions are attached to the positions which he held. It would have been his personal wish to retire from the Board at the same time as he retired from the Chairmanship and it is only at the express desire of his colleagues, that he has consented, subject to his re-election to-day, to continue as a Director until the end of our present financial year.

The Board have done me the honour to invite me to occupy the positions of Chairman and Joint Managing Director of the Company, previously held by Sir John, and I have accepted the invitation.

DEMAND EXCEEDS PRODUCTION

If I may now refer to the position of output in relation to demand, I would call your attention to the fact that the demand for coal in the Territories dependent upon Wankie has, since the end of the war, outstripped the pace of the increase in the output of coal, and our immediate and permanent problem is to overtake the total demand and then to keep ahead of it. In accomplishing this we feel sure that we can look to the Rhodesia Railways, upon whom we are dependent for the transport of our coal to our customers, for complete support and co-operation.

Our measure of the total present and anticipated demand has been taken from the estimates given by the Southern Rhodesian Government which are based upon the figures arrived at by a Government Committee specially appointed by the Cabinet. It is clear to the Board that this is the proper measure to be applied to the output capacity of the Company in order that it may be equipped to meet the total requirements of all its customers including, of course, the holding by the latter of full and ample stocks. It is upon this basis that the Directors have committed the Company to an immediate capital expenditure of over £2,000,000. Plans for raising the output still further in order to be ready for the anticipated demands up to 1955/1956 are now being discussed, and one of the principal reasons for the recent visit to Wankie of Mr. Lechmere-Oertel and Mr. G. W. Alexander, the Chief Engineer of Powell Duffryn Technical Services, Ltd., was to examine fully with the General Manager the planning and the capital cost of this further expansion.

Some publicity has been given recently to the position of the Copper Companies in relation to the deficiency in the supplies of coal which they require. At the present time the Copper Companies are each month short of something like 21,000 tons of coal and this shortage is being made up, so far as it is humanly possible to do it, by bringing in timber from increasingly greater distances. We are doing all we can to rectify this position as soon as possible.

PERSONAL CONTACT

The Managers, at the request of the Board, arranged for Mr. Keith Hogan, a Commercial Director of Powell Duffryn Group, to visit the Rhodesias and the Belgian Congo, to establish direct personal contact with all important industrial customers, to study the service given by the Company or its distributors both to these larger consumers and to the domestic consumers, and to make recommendations for any improvements in the producer-consumer relationship in order to bring Wankie into line with the best modern practice in this respect.

We have also arranged for Mr. I. F. G. McVicker, a senior combustion engineer on the staff of Powell Duffryn Technical Services, to visit the Rhodesias to make personal contact on a technical level with the principal consumers of Wankie Coal and to give them expert advice on its more efficient and economical use.

I am very glad to be able to report from my personal observations that the morale of the whole Wankie community is high, and that those in responsible positions from the General Manager downwards understand completely what they have to do.

It would be very wrong of me if I conveyed the impression that everything smooth going at Wankie. It is not, and they have an uphill climb in front of them, but I am satisfied that with the help which they are getting and will continue to get from the Managers they will come through this difficult period with success and with credit.

CAPITAL EXPENDITURE PROGRAMME

There are three matters of special importance in connection with the programme of capital expenditure which I should mention:

1. At a cost of over £450,000 a special water supply is being laid to Wankie direct from the Zambesi River. This is a difficult engineering project of considerable magnitude but is absolutely essential not only to support the increased output of coal and the other technical operations of the Company, but also to provide the whole community, with its population of 1,000 Europeans and 15,000 Natives, with an adequate supply of water during the rainless months of the year.

2. The next special matter I would like to mention is the mechanizaton of the production, handling and underground transport of the coal. It should be appreciated that the successful introduction of machinery for this purpose is by no means an easy matter, and involves the necessity for the most careful preliminary training, both of the European and the Native employees. Considerable teething troubles were experienced with the first mechanized units, most of which I am glad to say have by now been successfully overcome.

3. The expansion of the output which I have described, including of course the supply of electric power for the Zambesi Water Scheme entails a very considerable expansion to the Electricity Generating plant at Wankie and this is being undertaken in stages under the specialized advice of the Managers. I am glad to say that the work is well in hand.

I can only briefly refer to our other activities at Wankie which include the production of coke and tar and the manufacture of bricks of various descriptions. These important matters, which are of course an essential part of our technical and commercial progress, are at the present time the subject of close study by the General Manager in collaboration with the Managers, and I will refer to them more fully on a future occasion.

I can with first-hand knowledge tell you that Wankie

is a happy and healthy place, with a loyal hard-working and efficient staff, well and enthusiastically led by Mr. Braithwaite, with the loyal and able co-operation of Mr. D. D. Martin, the Assistant General Manager.

The thanks of the Shareholders are due to them all, and I am sure that it would be the unanimous wish of us all that we should record our thanks as part of our proceedings here to-day.

The report was adopted.

ANGLO-TRANSVAAL CONSOLIDATED INVESTMENT

HIGHER PROFITS AND STRONG CASH POSITION DEVELOPMENT IN SAND RIVER AREA

The Seventeenth Annual General Meeting of the Anglo-Transvaal Consolidated Investment Co., Ltd., was held on December 15 in Johannesburg.

Mr. B. L. Bernstein (joint managing director of the company) presided, and in the course of his address, said:

Ladies and gentlemen, in the unavoidable absence of your Chairman, Mr. S. G. Menell, it is my privilege to preside at this year's annual meeting.

The accounts before you to-day reveal that the company has had a very successful year. Revenue from all sources, after deducting general administration expenditure, totalled £874,800. Sundry amounts written off came to £54,500, making a net profit on the year's operations of £820,300, an increase of approximately £281,000 in comparison with the previous financial year. With the carry forward from last year of £319,900 and the recovery of an amount of £63,400 previously written off, a total sum of £1,203,600 was available for appropriation.

The usual preference dividends, a dividend of 50 per cent on the ordinary and "A" ordinary shares, and the special payment of 7½ per cent on the ordinary dividend, absorbed £511,300. £180,000 has been provided for taxation, compared with £95,000 for last year, and £200,000 has been allocated to reserve for shares and interests in other concerns. These appropriations total £891,300, and leave a carry forward to the current financial year of £312,300.

GROUP ACTIVITIES

The Chairman referred to the activities of the individual companies in the group during the year:

Rand Leases (Vogelstruisfontein) Gold Mining Co., Ltd.—2,407,500 tons were crushed at a recovery grade of 3.222 dwt. per ton, resulting in a working profit of £1,212,631. Dividends paid totalled 35 per cent.

Village Main Reef Gold Mining Co. (1934), Ltd.—386,300 tons were treated at a recovery grade of 3.031 dwt. per ton. Dividends totalled 20 per cent.

New Klerksdorp Gold Estates, Ltd.—94,500 tons were crushed at a working profit of £15,384.

Consolidated Murchison (Transvaal) Goldfields and Development Co., Ltd.—Ore milled totalled 138,600 tons, which yielded 8,917 f.oz. of gold and 7,990 s.tons of antimony concentrates and cobbed ore. Dividends paid totalled 50 per cent. The interim dividend for the half-year ended June 30, 1950, was 30 per cent.

MIDDLE WITWATERSRAND (WESTERN AREAS), LTD.

In the Van den Heeversrust area drilling is being continued in conjunction with General Exploration O.F.S., Ltd. To date the continuity of the Basal Reef at workable depths and at payable values has been proved. Payable values have been intersected in boreholes VDH.1, TV.2, and K.1 in upper reefs within a zone above the Basal Reef horizon. These boreholes are situated in a straight line over a distance of some 14,000 ft. The drilling programme is designed to provide information as to the lateral extent of this occurrence as well as further information regarding Basal Reef.

In the Klerksdorp district this company continues to be substantially interested in the Stilfontein-Hartebeestfontein area.

VIRGINIA ORANGE FREE STATE GOLD MINING CO., LTD.

This company has purchased from Middle Witwatersrand (Western Areas), Ltd., the lease over the Virginia area. Rapid progress has been made with shaft sinking and with surface construction.

MERRIESPRUIT (ORANGE FREE STATE) GOLD MINING CO., LTD.

This company will take cession in due course of the lease granted to Middle Witwatersrand (Western Areas), Ltd., over the Merriespruit lease area. Initial operations for two vertical circular shafts were commenced towards the end of August, 1950.

Kennecott-Anglovaal Exploration Co., Ltd.—During the year this company has continued exploratory drilling operations in the Bothaville and Kroonstad districts of the Orange Free State.

Anglo-Transvaal Collieries, Ltd.—The total sales output, marketed for the year by this group of collieries, amounted to 1,106,279 tons.

THE ASSOCIATED MANGANESE MINES OF SOUTH AFRICA LTD.

This company has had a very successful year, recording an excess of revenue over expenditure of £602,893, compared with £149,311 for the year ended December 31, 1948, and dividends aggregating 75 per cent were paid.

SOUTH AFRICAN TORBANITE MINING & REFINING CO., LTD.

The annual accounts of South African Torbanite Mining & Refining Co., Ltd., for the financial year ended June 25, 1950, reflects a satisfactory improvement over the figures for the previous year. The net profit for the year was £146,308, as compared with £82,148 for the year 1949.

Operations at both Ermelo and Boksburg have been satisfactory and improvements in operating efficiency have been obtained.

Dunswart Iron & Steel Works, Ltd.—The trading profit for the year amounted to £65,769, compared with £69,544 for the year ended June 30, 1949.

ANGLO-ALPHA CEMENT, LTD.

Trading operations by this company for the year resulted in a net profit of £104,890 after providing an increased amount for depreciation.

OIL FROM COAL

In 1947, in terms of the Liquid Fuel and Oil Act, we were granted a licence from the Government to be held in trust for a company to be formed to establish a works to produce motor fuel and allied products. Early in this year we informed the Government that it was not possible to obtain the large amount required for the undertaking without a State guarantee for at least a substantial part. The Government, although they considered the industry of great national importance, would not take on a commitment of such a nature in the interest of a private enterprise.

In the light of this and in order to facilitate the early establishment of this industry, your company agreed to transfer all its rights and options, as well as all accumulated technical knowledge in connection with the oil from coal project to the South African Coal Oil and Gas Corporation, Ltd., which has been formed under sponsorship of the Government. The terms on which this agreement is based provide for compensation on a scale which will fully justify the company's expenditure and efforts during the past 15 years.

SAND RIVER AREA

Before concluding, I will refer briefly to the activities which have taken place in the Sand River area, where the development of two mines has constituted a major achievement of our group during the year.

So far as the financial considerations are concerned, the growing scarcity of venture capital has, in our view, amply justified your company's efforts to devise new methods and to attract capital for the development of the Free State. The provision of nearly £5,000,000 in the form of dollars is not only evidence of the confidence which exists in the future of the Sand River area, but also an appreciable contribution to the country's balance of payments.

In conclusion, I desire to place on record our appreciation of the excellent services rendered to the company by its executive and staffs both in South Africa and in London.

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LONDON & RHODESIAN MINING AND LAND

The Annual General Meeting of the London and Rhodesian Mining and Land Co. Ltd. was held on December 28, in London.

The Chairman **Sir Joseph Ball, K.B.E.,** who presided, in the course of his speech said:

Before commencing my review of the year's operations, I desire to express on behalf of my fellow directors, and I have no doubt on behalf of the general body of stockholders also, our great regret that, for reasons of health, Viscount Elibank found it necessary in August last to retire from the chair and from the Board.

Turning now to the directors' report and the statement of accounts, it seems to me that these give so clear a picture of the year's operations as to call for little further comment from me.

It is however, evident that there has been a substantial strengthening of the balance sheet position during the year under review, and I am glad to be able to inform you that there is every indication that this improvement will be carried still further during the current year. As you know, the Board have found it possible to increase the dividend, having declared an interim dividend of 6 per cent, less tax, in respect of the current year, as against one of 5 per cent for the past 11 years.

Reverting for a moment to the company's balance sheet, the position is, in fact, a good deal stronger than that indicated by the actual figures. For example, under "Fixed assets," farms, ranches, town stands and buildings are of considerably greater potential value than the figure at which they appear in the balance sheet; while the company's mining properties also, in the opinion of the Board, stand at a figure well below their intrinsic value. The book value of our holdings of "quoted securities" was increased during the year by approximately £48,000 to £325,058 and, as shown in parentheses, the market value at the end of the year under review was substantially higher than the book value. I may add that since the date of the balance sheet, apart from substantial profits which have been realized, the market value of our quoted securities has increased by a further £29,000.

The general reserve has been increased to £85,000 by the addition of the sum of £60,000 transferred from profit and loss (appropriation) account. As you will observe, a large portion of the profits for the year arose from the sale of properties and mining claims and, in the circumstances, your Board considered it prudent that a substantial part of the receipts from that source should be retained available for replacement purposes.

In spite of the serious effect of the drought which prevailed in Southern Rhodesia during the year, the profits from ranching were £2,242 up at £29,734.

Details of our mining operations are set out in the directors' report and it is, therefore, unnecessary for me to repeat them here.

The company's valuable land holdings and buildings comprise over a million acres of land and 27 town stands and buildings situated in Salisbury, Bulawayo and other important developing centres in Southern Rhodesia. Of this acreage, 547,951 acres are represented by our ranches, Wiltshire and Lochard.

As I have previously stated, the present-day value of these assets is known to be very much in excess of the figure at which they appear in the balance sheet and, in the circumstances, the Board has decided to arrange for a detailed survey of and report on the whole of the company's large holdings in order to enable the directors to decide upon the policy to be adopted in regard to each property.

I should like to make it clear that we intend to pursue a forward policy with regard to any of the company's land which is ripe for development, either by ourselves or by others who may be interested.

With regard to the present season, I am, however, glad to be able to report that, in a cable received from our Salisbury office on December 11, we were informed that the drought which had appeared to be developing had broken and that substantial rainfalls had occurred all over that part of the country in which our ranches are situated.

I cannot conclude my remarks without referring to the very damaging effect of the present crippling burden of U.K. taxation on companies registered in this country. To the high rate of income tax maintained in the post-war years have been added the heavy taxes upon both distributed and undistributed profits, and the total burden thus imposed has had two very serious effects from a national point of view. In the first place, the sources of British capital for new enterprises are being rapidly dried up by these heavy inroads on savings; and, secondly, companies are being deprived of the opportunity of setting aside the funds necessary to provide for such unavoidable new capital expenditure as the provision of essential buildings and equipment, a matter of special importance to mining companies as their mines increase in depth.

The report and accounts were unanimously adopted.

At a subsequent Extraordinary General Meeting resolutions were passed approving alterations in the provisions of the memorandum of association.

Topical News in Brief

All-Electric Pit Shaft for Scotland.—A new all-electric pit shaft is proposed for Littlemill, Rankinson, Ayrshire, Scotland, which will supersede a smaller one at present producing 200 tons of coal a day. Workings at the new shaft will be constructed at lower levels and are expected to increase output to between 800 and 1,000 tons a day.

More Potash from New Mexico.—The Southwest Potash Corporation—a subsidiary of the American Metal Co. Ltd.—has completed plans for a new potash refinery and mining shaft near Carlsbad, New Mexico, it is reported. The scheme will cost an estimated $10,000,000. Operations are expected to begin by the end of 1951 and potash output is scheduled to reach 185,000 tons a year.

Argentina to be Self-Sufficient in Zinc.—Argentine industrial quarters expect a substantial increase in the domestic output of zinc as a result of the inauguration of the new roasting plant near Rosario and the new Chubut smelter—which has an annual capacity of about 10,000 tonnes—making it possible to cover the Republic's requirements without having recourse to imports from abroad. Increase of zinc output is part of the country's programme for the development of the little tapped mineral wealth of Argentina.

Light Metals May Replace Iron and Steel.—An announcement of interest was made last month by the Canadian Minister of Transport, Mr. Chevrier, speaking to the Vancouver Board of Trade when he stated that "it may be that the important characteristics of the years before us will be the replacement of iron and steel by the light metals." Continuing, Mr. Chevrier enumerated the various mineral areas which had been prospected and developed by air transport, and said that "the quest continues at an even greater pace as new discoveries on the industrial front bring forth new demands for the lighter metals and alloys."

Sulphuric Acid from Gypsum.—In view of the complete absence of naturally occurring sulphur in India and the stoppage of imports from the dollar area, and of the great importance of sulphuric acid for all industrial development, the Council of Scientific and Industrial Research have recommended that the Government of India should put up a pilot plant for the manufacture of sulphur from gypsum, large reserves of which are available in India. The Council have also decided to investigate the possibility of tapping copper pyrites and other similar sources of sulphur for the manufacture of sulphuric acid.

France's Fluorspar Position.—An article in the December, 1950 issue of *Echo des Mines et de la Metallurgie* surveys the occurrences and output of fluorspar in France. It stated that at the beginning of 1950, eleven deposits were permanently exploited, viz., in the following departments: Saone-et-Loire, Puy-le-Dome, Haute-Loire, Aveyron, Tarn and Var. Total output for 1949 (in tonnes, round figures), the last year for which figures are given amounted to 39,300, as compared with 32,500 in 1948 and a peak of 63,100 in 1939. The current output covers industrial requirements reasonably well and the additional requirements of 10,000 tons required in connexion with the further development of the French steel and aluminium industries can easily be met. The most important reserves are those of l'Esterel (Var).

Exploratory Drilling on James Bay.—Forty-five miles north of Moosonee on the west coast of James Bay, most northerly point for operations ever undertaken in Ontario, the Department of Mines has completed drilling at Piskoshi Point. It was an exploratory geological project of a kind and scope never attempted before in the Province.

The purpose of this drilling was to gain geological information as to the sequence and structure of the rock formations under the muskeg in the Moose River Basin. This muskeg-covered area between the Moose and the Albany rivers is more than 15,000 sq. miles in extent. As most of the territory is inaccessible overland, and as there are only scarce outcroppings of rock along river ways, the task presented formidable difficulties to a geological survey.

Chile to Complete Smelter.—The Government of Chile is reported to have allocated the sum of pesos 37,000,000 to continue the construction of the metal smelting plant at Paipote near Copiapo in the north of the country. A Bill is also to be drawn up, proposing expenditure to the amount of 245,000,000 pesos for the completion of the plant. The construction of this smelter, which was started in 1947, is designed to stimulate the activities of the small and medium-sized mining enterprises whose ore output has to be shipped abroad for refining at present. The capacity of the plant is 142,000 tons per annum of ores and concentrates, giving a production of 20,000 tons of copper, 1.4 tons of gold and 3.5 tons of silver. It is hoped that the plant, on which pesos 230,000,000 have already been spent, will be ready for operation in the middle of 1951.

KENT (F.M.S.) TIN DREDGING, LTD.

The Twenty-third Ordinary General Meeting of Kent (F.M.S.) Tin Dredging, Ltd., was held on December 29, at the Registered Office, Redruth.

Mr. Stanley Wickett (Chairman), presided.

The Report and Accounts for the year ended December 31, 1949, having been circulated for the prescribed time, were taken as read, as was also the Chairman's Statement, circulated with the Report and Accounts, which was as follows:

The Accounts for the year ended December 31, 1949, show a gross Profit of £51,012, as compared with £45,859 of the previous year.

Royalty of £23,714 was paid to the Malayan Government prior to arriving at the above figure and from the gross profit United Kingdom Taxation required provision of £28,616.

After providing £486 for depreciation and for the transfer of £9,320 to General Reserve, Shareholders received Dividends of 20 per cent amounting to £11,550 net. The Directors propose that the balance standing to the credit of Profit and Loss Account be carried forward to the next account.

From the Report of Messrs. Osborne & Chappel, our General Managers, it will be noted that during the year the dredge reached the northern boundary and turned to the west, working ground which, as anticipated, yielded an increase in output at a slightly lower cost per cubic yard, the general rise in prices having been successfully offset by economies at the Mine.

Since the close of the year under review the dredge has been treating ground appreciably above the average value of the property and Shareholders have been advised by postcards of the very satisfactory outputs of tin ore:

January—March, 1950	1,945 piculs	= 115¾ tons.
April—June, 1950	2,400 piculs	= 142¾ tons.
July—September, 1950	2,180 piculs	= 129¾ tons.

It is anticipated that outputs will continue to be above the average during the immediate future months.

At the present time comment on the tin market would be rash, but the recent exceptionally high prices received for metallic tin should be regarded as temporary, due to world conditions and the present difficulties in Malaya which success of the forces of law and order will correct.

The steadfastness of miners and planters in Malaya has universally earned most fully justified admiration. On behalf of all Shareholders I record our particular thanks to our General Managers and the Staff and labour force for the success they are achieving under harassing conditions.

The Statement of Accounts and Balance Sheet, together with the Directors' Report, were received and adopted.

MINING ENGINEER FOR PRIVATE ENTERPRISE IN QUEENSLAND, AUSTRALIA

QUEENSLAND INDUSTRIES PTY. LTD., subsidiary of City Electric Light Co. Ltd., Brisbane (the largest public utility company in Australia supplying electricity) requires qualified and experienced mining engineer.

Requirements:

(*a*) Applicants must be holders of a degree of a recognized University or possess other adequate technical qualifications.

(*b*) Applicants must have had substantial practical experience of mechanized mining by both long wall and pillar and stall methods.

(*c*) Applicants must be able to design the lay-out of and to open up mechanized collieries and thereafter to operate them as Colliery Manager or Superintendent.

(*d*) Surface experience is not required.

(*e*) Applicants must not be over 45 years of age and preferably be under 35.

The coal mines to be opened up are situated adjacent to the City of Ipswich, 24 miles from Brisbane, the Capital of Queensland. Mining problems are believed to be not dissimilar to those encountered in Yorkshire and Durham.

Starting salary offered is £1,500 (Australian) per annum subject to annual review, but a higher starting salary would be considered in special cases. Passage to Queensland for successful applicant and family will be arranged on applicant entering into a bond of service for a period of five years. Queensland Industries Pty. Ltd. will provide suitable accommodation at Ipswich for successful applicants. Where a house is required this will be provided. The house can either be leased or bought from the Company.

Applications, in triplicate, accompanied by copies only of references and stating age, marital state, experience, qualifications etc., will close with The English Scottish and Australian Bank Ltd., 5, Gracechurch Street, London, E.C.3, on February 7, 1951.

Further particulars concerning the coal field and Queensland may be obtained on application to the Bank.

QUEENSLAND INDUSTRIES PTY. LTD.

BRITISH BURMAH PETROLEUM

The Thirty-ninth Ordinary General Meeting of The British Burmah Petroleum Co., Ltd., was held on December 29 in London, **Mr. Keith Trevor, M.C.,** presiding in the absence of the Chairman, Mr. A. P. Faickney.

The following is an extract from the Chairman's circulated statement for the year ended March 31, 1950:

The information in the directors' report as to the situation in Burma leaves little that I can usefully add. The hopes which I expressed last year that some improvement in conditions in Burma might be expected were falsified by the event. The conditions under which the industry carried on severely restricted operations were so difficult and doubtful that no progress was possible with the joint working arrangement with the Burmah Oil Co., Ltd., and Indo-Burma Petroleum Co., Ltd., which has been under discussion with these companies since the end of the war and which had reached an advanced stage. The difficulties of the whole situation were only temporarily eased by financial assistance accorded by H.M. Government to enable the companies to continue operations to rehabilitate the oil industry. The difficulty and insecurity of the outlook at the close of the year are reflected in the company's accounts and dominate the directors' report and this statement. Since then conditions in Burma have eased somewhat, and I am not without hope that with slightly improved prospects the joint working arrangement with the other companies will come into operation at a not far distant date, so that the company's position may be set on an ascertained basis. The ex gratia payment by H.M. Government, which I mentioned last year, was assessed by the independent Committee constituted for the purpose, and was paid towards the close of the year. The payment is reflected in the accounts.

From the profit and loss and appropriation accounts you will see that certain proceeds have been received in respect of the sale of indigenous oil products. I feel I should explain that, despite unsettled conditions, a restricted amount of production from the fields has been maintained.

The only other item to which I wish to refer is the reduction in the fixed assets in the Far East by £20,000. This represents the sale proceeds of our company's property in Calcutta which had become redundant. The sale price was somewhat in excess of the book value of the property.

The operations of the South African subsidiary are reflected in the consolidated accounts.

The report was adopted.

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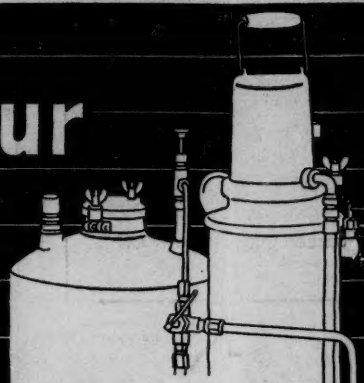

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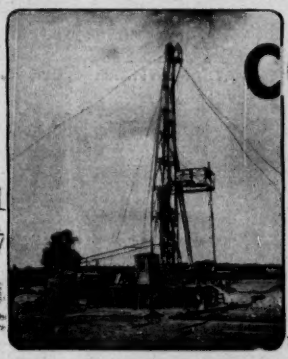

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